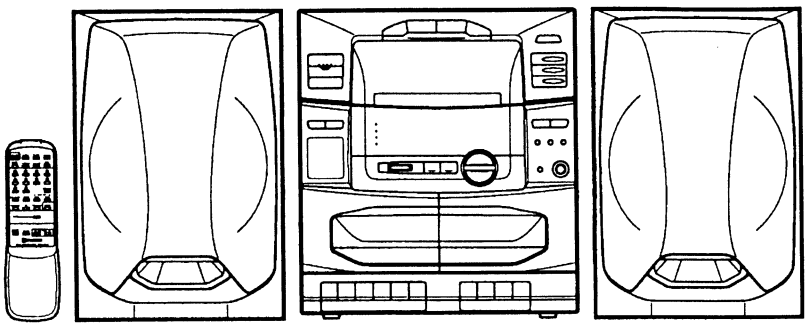
SANYO

FILE NO.

Service Manual

Mini Component System DC-F210 (UK) (XE)



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PRODUCT CODE No.
129 526 02 (UK)
129 526 03 (XE)

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This service manual consists of "DC-F210U" (Main unit),
"RB-F210" (Remote control) and "SX-F210" (Speaker system).

REFERENCE No. SM580851

SPECIFICATIONS

Amplifier section

Output power ..... 22.5 W x 2
(at 4 ohms, 10 % distortion)
Sound preset ..... 4 electronic presets
Inputs ..... VIDEO IN : 400 mV / 50k ohms
Outputs ..... SPEAKERS : 4 ohms
PHONES : 8 - 32 ohms

Tuner section

Reception frequency
FM ..... 87.5 MHz - 108 MHz
MW ..... 522 kHz - 1611 kHz
LW ..... 144 - 288 kHz

CD changer section

Type ..... Changer, 3-disc
Channels ..... 2-channel stereo
Sampling frequency ..... 44.1 kHz
Pick-up ..... Optical 3-beam
semiconductor laser
Frequency response ..... 20 Hz - 20 kHz
Wow and Flutter ..... Below measurable limits

Cassette deck section

Track system ..... 4-track, 2-channel stereo
Frequency response ..... 80 Hz - 13.5 kHz (Normal tape)
Signal to noise ratio ..... 45 dB
Wow and Flutter ..... 0.15% (WRMS)
Tape speed ..... 4.75 cm/sec.
Fast forward / Rewind time .... Approx. 110 sec. (C-60)

General

Power requirements ..... AC 230 V, 50 Hz
Power consumption ..... 74 W
Dimensions (W x H x D) ..... Approx. 270 x 300 x 313 mm
Weight ..... Approx. 6.9 kg

RB-F210 Wireless remote control

Power requirements ..... 2 "AA" batteries
Dimensions (W x H x D) ..... Approx. 56 x 180 x 18
Weight ..... Approx. 58 g
(without batteries)

SX-F210 Speaker system

Type ..... 3 way bass reflex
Drivers ..... Woofer : 12 cm cone type
Tweeter : piezoelectric
Super tweeter : piezoelectric
Maximum
Power-handling capacity ..... 45 W (peak)
Nominal impedance ..... 4 ohms
Dimensions (W x H x D) ..... Approx. 200 x 300 x 235 mm
Weight ..... Approx. 2.2 kg (per speaker)

Specifications subject to change without notice.

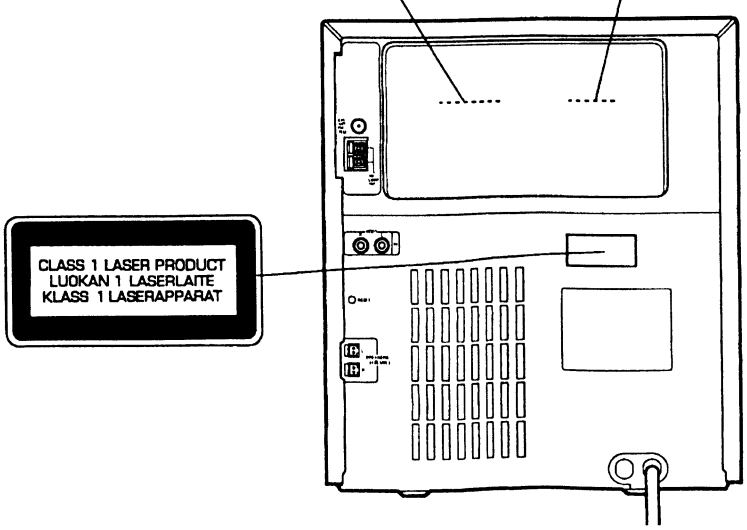
LASER BEAM SAFETY PRECAUTION

CAUTION :
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

LASER OUTPUT ..... 0.6 mW Max. (CW)
WAVE LENGTH ..... 790 nm

CAUTION – INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL – USYNLIG LASER STRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION, UNDGÅ UDS ÆTTELSE FOR STRÅLING.
VARNING – OSYNLIG LASER STRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRR ÄR URKOPPLAD. STRÅLEN ÄR FARLIG.
VORSICHT – UNSICHTBARE LASERSTRAHLUNG TRITT AUS, WENN DECKEL GEÖFFNET UND WENN SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT IST. NICHT, DEM STRAHL AUSSETZEN.
VARO – AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.

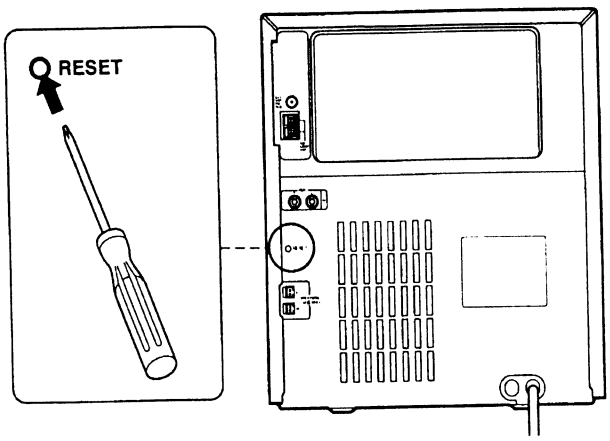
(XE ONLY)



WHAT TO DO IF

- If the operation of the unit or display is not normal,or you wish to clear the contents of the memory.

  1. Disconnect the power cord's plug from the electrical outlet.
  2. Press the **RESET** button for at least **30** seconds.
  3. Connect the power cord.
  4. Press the **POWER** button to turn the power on.

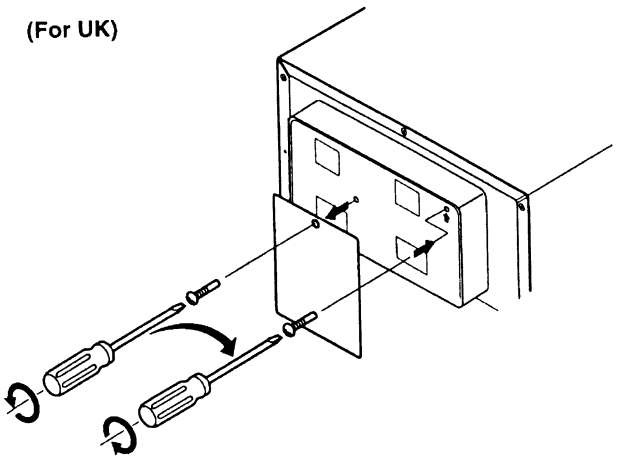


BEFORE USE OR TRANSPORTATION

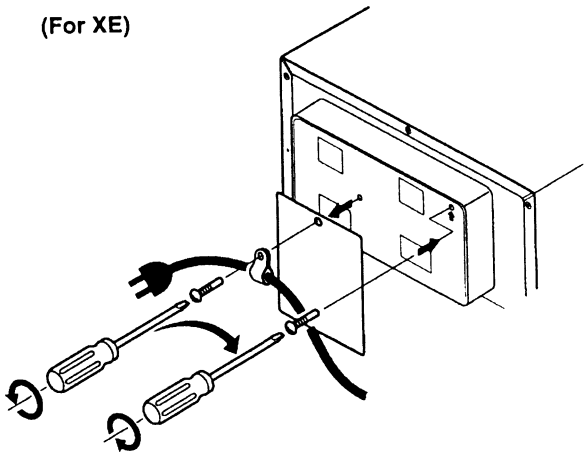
- **Before use**

  1. Remove the shipping screws from the rear of the unit.
  2. This screw is used to secure the CD mechanism during shipment and should be retained for future use.

(For UK)



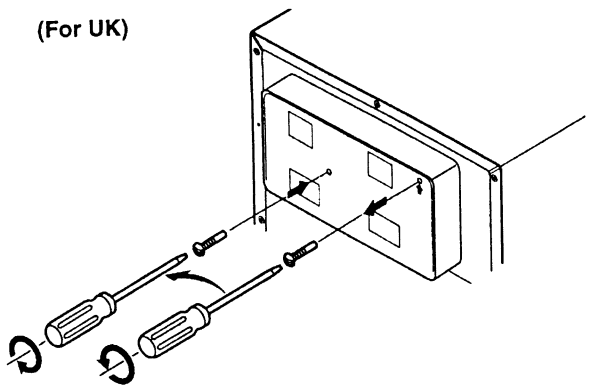
(For XE)



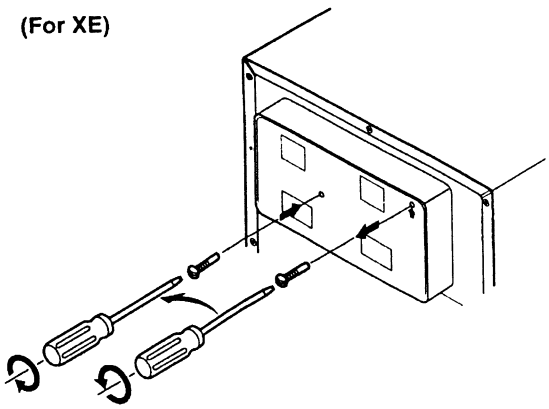
- **Before transportation**

  1. Turn on the power and remove all discs from the unit.
  2. Turn the POWER off. [STANDBY] lights.
  3. Then unplug the power cord from the AC outlet.
  4. Reinstall the shipping screw.

(For UK)



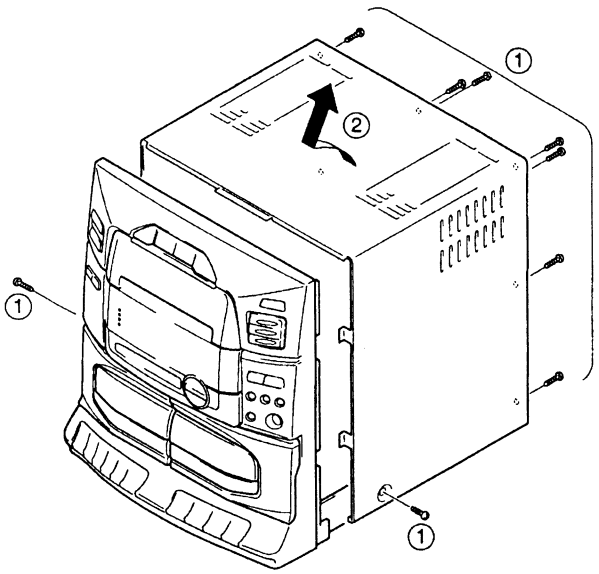
(For XE)



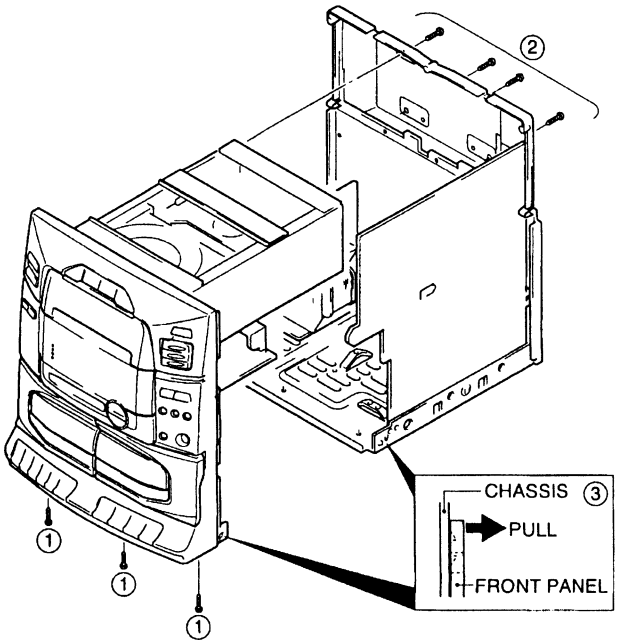
REMOVAL AND INSTALLATION

- Press the "POWER" button and check that the STANDBY LED lights.
- Disconnect the power cord's plug from the electrical outlet.
- All wiring should be returned to the original position after work is completed.
- First have ready may the new FIXERS(614 129 4971) for replacement..
- Arrange the lead wires so that they are not near the heat sink.

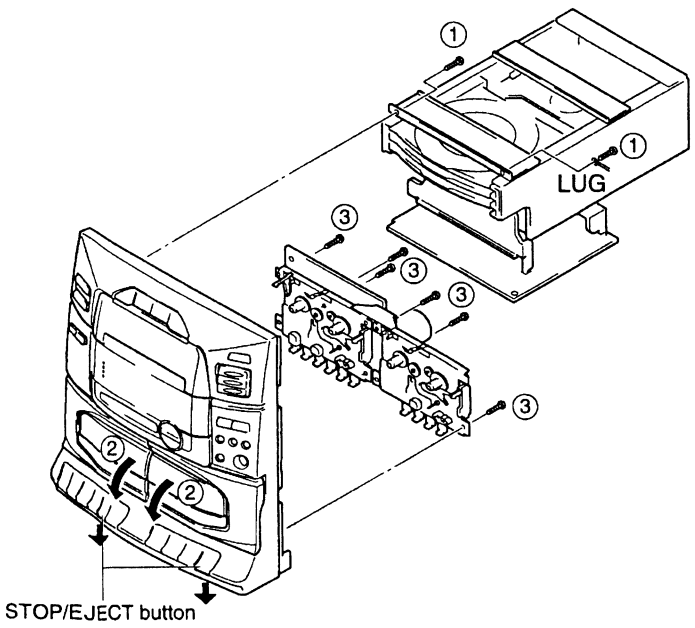
1. CABINET ASSY



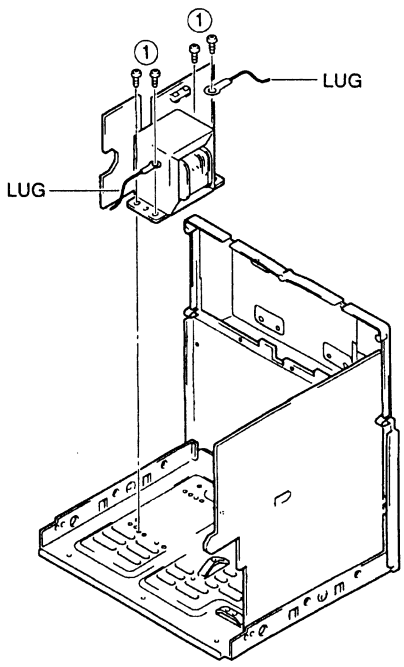
2. FRONT PANEL BLOCK



3. TAPE AND CD MECHANISM BLOCK



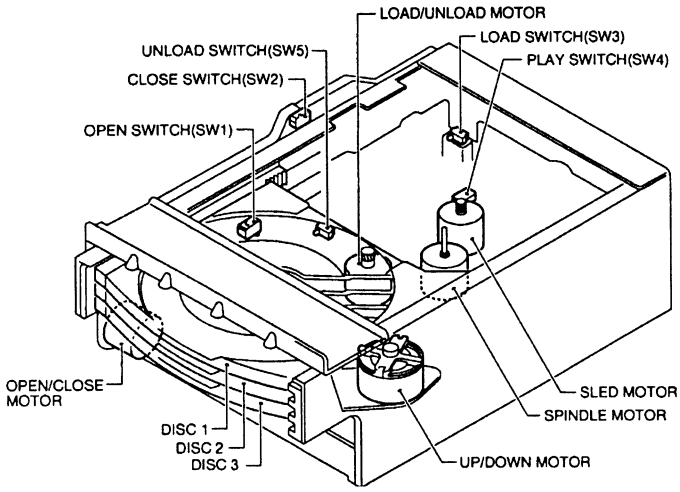
4. POWER TRANSFORMER



CD CHANGER OPERATION AND DESCRIPTION

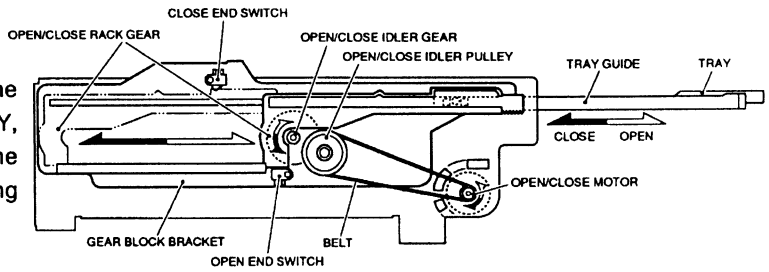
- This set is capable of stocking and playing up to 3 CDs.
- While playing a CD, other discs can be replaced.
  In this case, press the button for the disc No. you wish to remove, and then press the OPEN/CLOSE button.
- When the "POWER" button is turned off, the power turns off after the discs are loaded in the discs trays.

1. MOTOR & MECHANISM SWITCHES LAYOUT



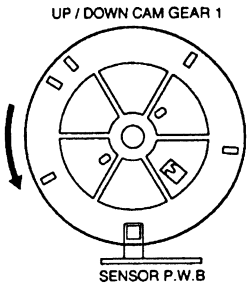
2. FUNCTION

(1) OPEN/CLOSE

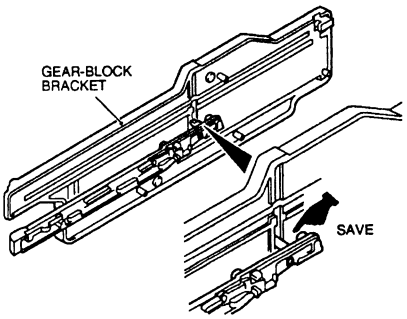


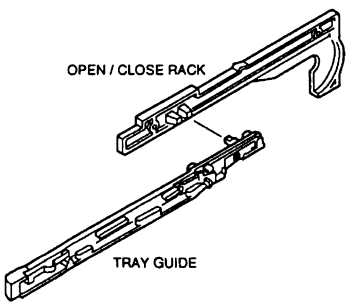
1. The rotation of the OPEN/CLOSE MOTOR rotates the OPEN/CLOSE IDLER GEAR via the BELT and PULLEY, and the RACK GEAR which is intermeshed with the OPEN/CLOSE IDLER GEAR moves forward during "OPEN", backwards during "CLOSE".

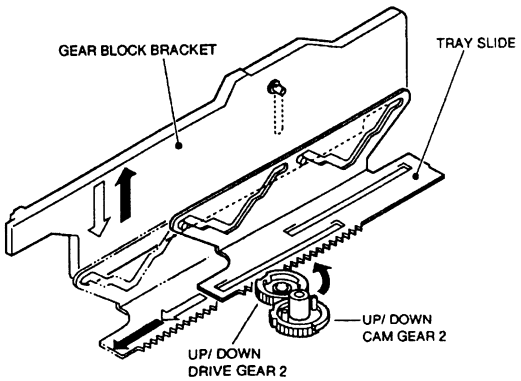
- The HOME POSITION is reached when the largest square hole in the UP/DOWN CAM GEAR is between the SENSORS.



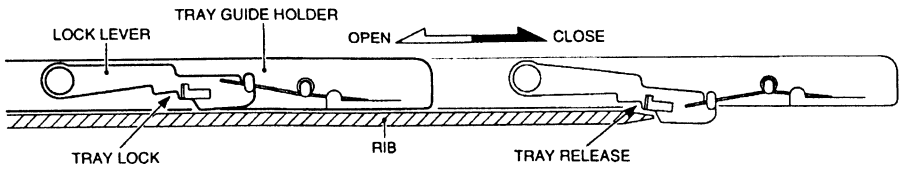
2. Rotate the UP/DOWN CAM GEAR counter-clockwise (with OPEN/CLOSE during PLAY) or clockwise (with normal OPEN/CLOSE), raise the GEAR-BLOCK BRACKET, stop at the selected TRAY, hold the TRAY GUIDE by means of the OPEN/CLOSE RACK and save the other TRAY GUIDES.
3. The OPEN/CLOSE motor start running, the OPEN/CLOSE RACK moves forward, the TRAY LOCK LEVER is raised to lock the TRAY, and the OPEN operation commences.





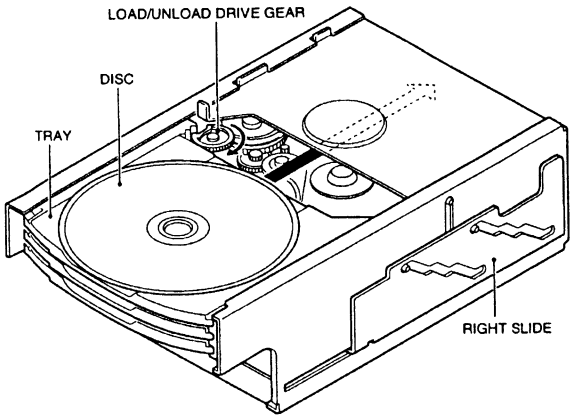


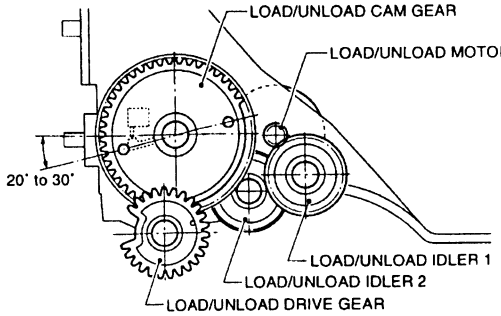
4. When the TRAY closes and it reaches the tip of RIB part of LEFT TRAY GUIDE, the LOCK LEVER is lowered to release the TRAY, and loading proceeds.



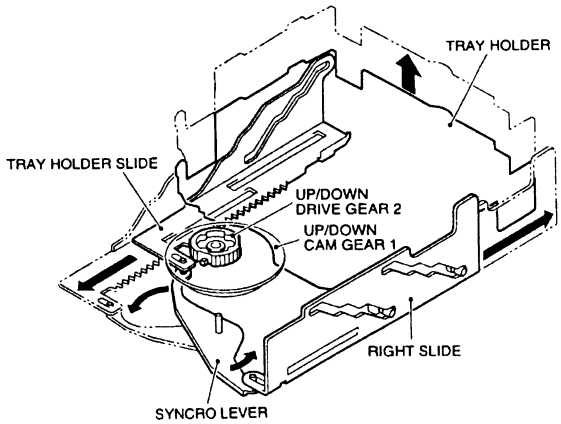
(2) LOADING

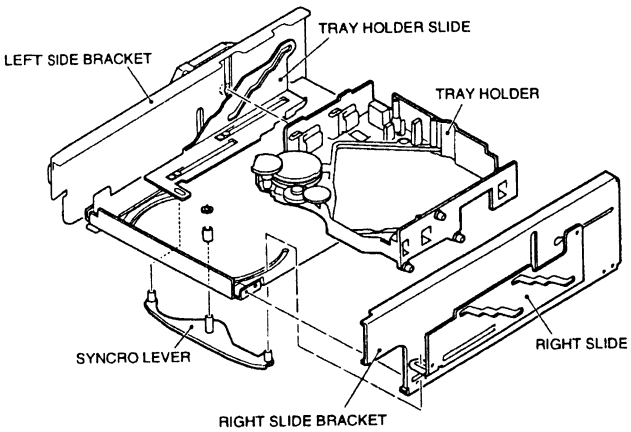
1. The rotation of the LOAD/UNLOAD MOTOR rotates the LOAD/UNLOAD DRIVE GEAR in the clockwise direction.
2. The DRIVE GEAR and the gear portion of the TRAY mesh together and the TRAY movers backward.
3. The completion of TRAY movement causes the UP/DOWN MOTOR to operate and lower the TRAY HOLDER putting the until to chucking status.

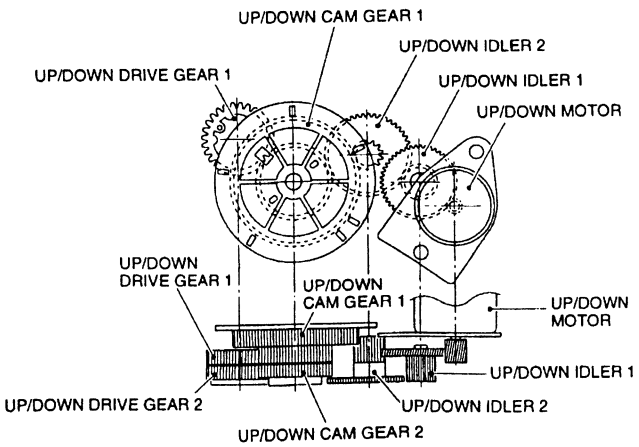




4. The rotation of the UP/DOWN MOTOR rotates the UP/DOWN GEAR in the counter-clockwise direction. In connection with this, the TRAY HOLDER SLIDE moves forward, and at the same time, the RIGHT SLIDE is moved backwards by the SYNCHRO LEVER.



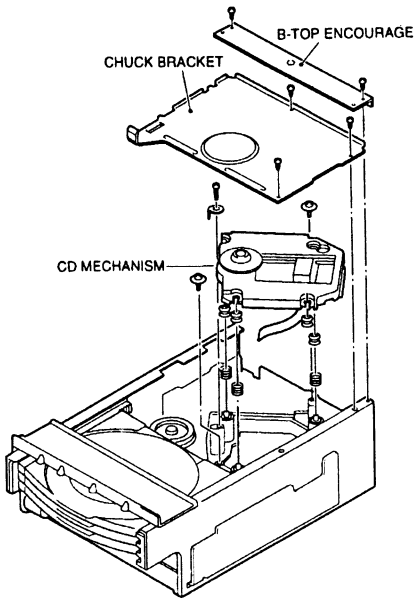




CD CHANGER REPLACEMENT

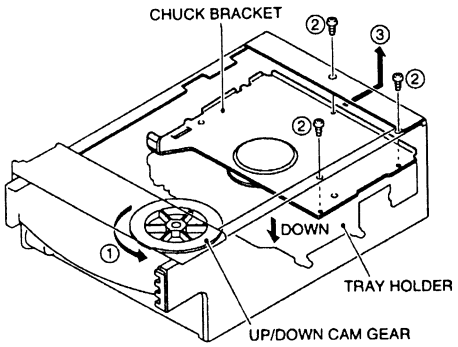
1. LOAD/UNLOAD FUNCTION

1. Remove the B TOP ENCOURAGE.
2. Remove the CD MECHANISM.

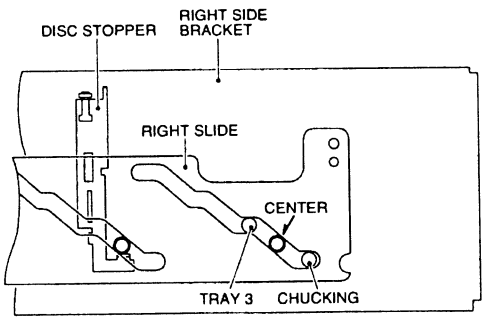


2. HOW TO REMOVE THE TRAYS

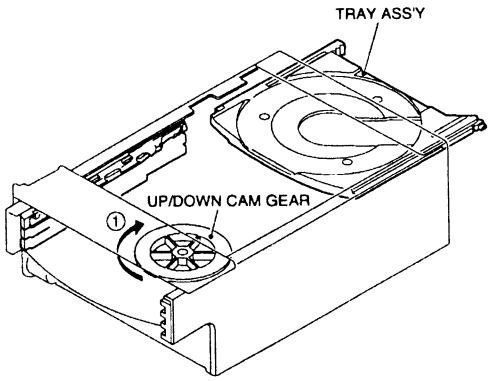
1. Remove the CHUCK BRACKET.(① - ③)



2. Rotate the UP/DOWN CAM GEAR and position the collar part of the TRAY HOLDER visible from the RIGHT SLIDE at the midpoint between the CHUCKING and TRAY.



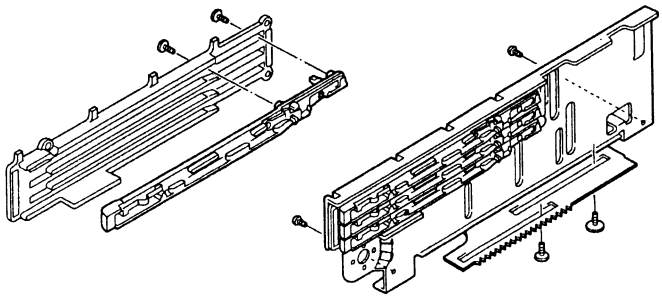
3. Remove the three TRAYS through the gap at the back.

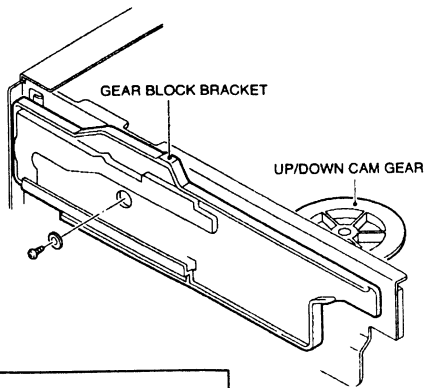


3. REPLACING THE TRAY GUIDE

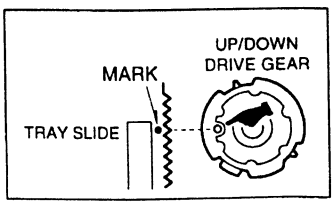
- Have the LEFT TRAY GUIDE HOLDER and TRAY GUIDE ready before proceeding.

1. Turn the UP/DOWN CAM GEAR and remove the setscrew of the TRAY HOLDER from the hole in the GEAR BLOCK BRACKET.
2. Turn the UP/DOWN CAM GEAR counter-clockwise as far as it will go, and remove the SCREWS.



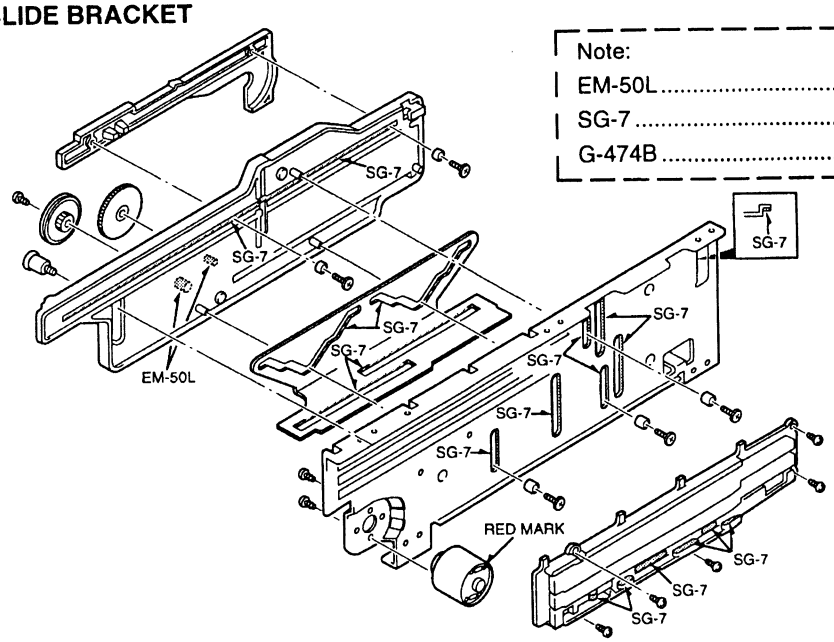


3. Remove the five set screws of the LEFT TRAY GUIDE HOLDER, and remove it in the direction of the arrow.
4. When assembling the parts, align the TRAY SLIDE and UP/DOWN DRIVE GEAR.



CD CHANGER REPLACEMENT

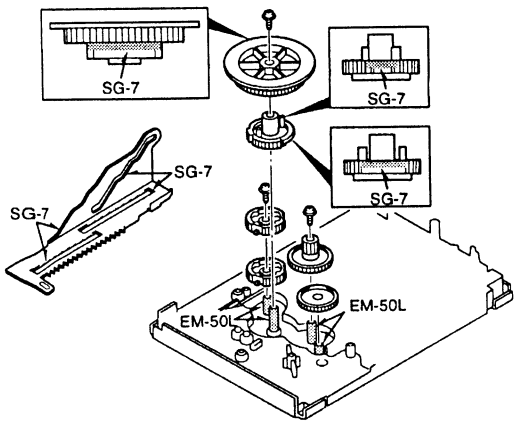
4. LEFT SLIDE BRACKET



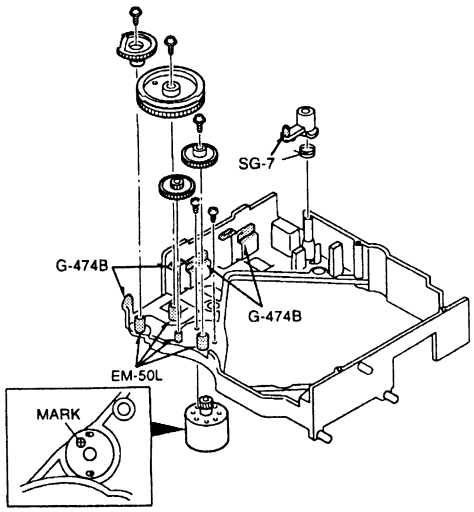
Note:

EM-50L	MOLYKOTE, EM-50L
SG-7	SAN GREASE, SG-7
G-474B	FLOIL OIL, G-474B

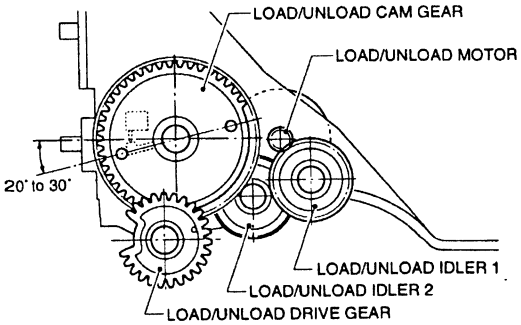
5. UP/DOWN CAM GEAR



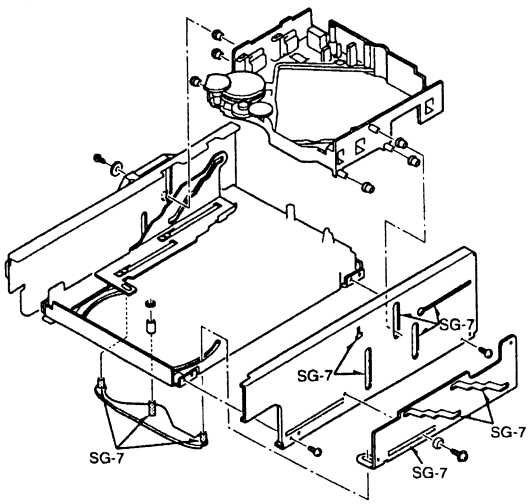
6. LOAD/UNLOAD GEAR



7. SETTING UP THE LOAD/UNLOAD GEAR



8. TRAY HOLDER

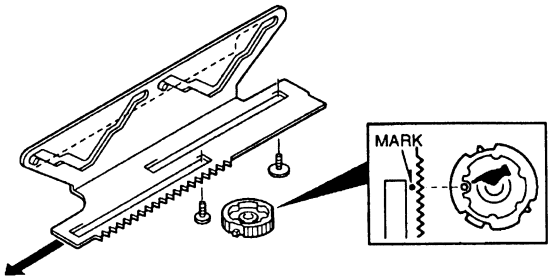


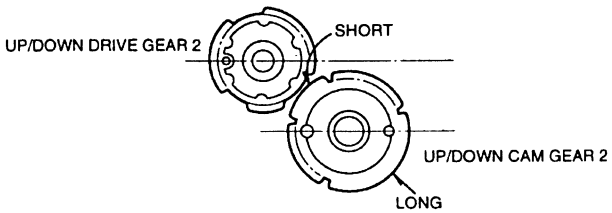
CD CHANGER REPLACEMENT

9. SETTING UP THE TRAY SLIDE AND UP/DOWN DRIVE GEAR 2

1. Slide the TRAY SLIDE forward until it goes no further.
2. Align the round mark on the UP/DOWN DRIVE GEAR 2. with the mark area on the TRAY SLIDE, and install.
3. Align the shorter flat part of the UP/DOWN CAM GEAR 2, and install.

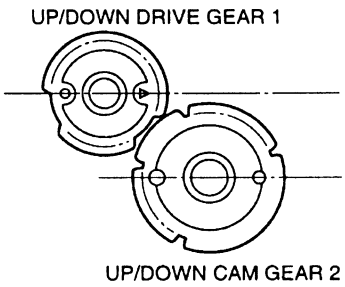
- Set the parts in such a way that the round marks on the two GEARS are horizontal.



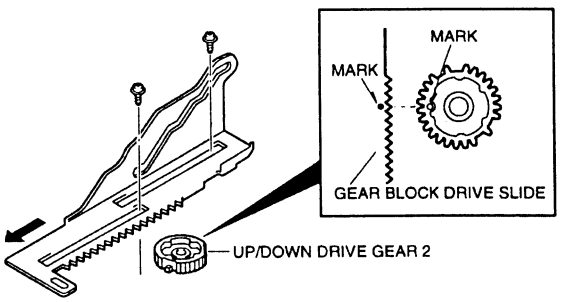


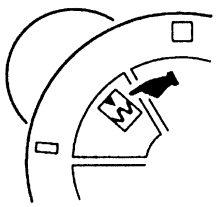
10. SETTING UP THE TRAY HOLDER AND UP/DOWN DRIVE GEAR

1. Loosen and install the SET SCREW of the SENSOR P.W.B.
2. Slide the TRAY HOLDER SLIDE forward until it goes no further.
3. Align the round mark on the UP/DOWN DRIVE GEAR 1 with the mark area on the TRAY HOLDER SLIDE, and install.
4. Secure the screw.
5. As shown in the figure, place the UP/DOWN DRIVE GEAR 2 and UP/DOWN CAM GEAR 2 in such a way that they are horizontal.
6. Align with the triangular mark through the hole through which the UP/DOWN CAM GEAR 2 teeth are visible.
7. Secure the SCREW of the SENSOR and GEAR.

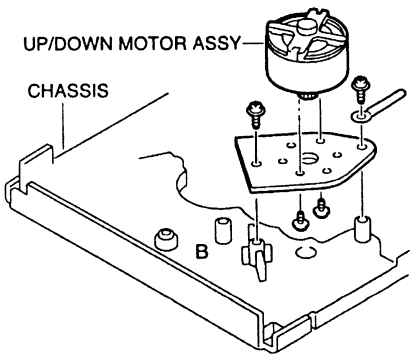


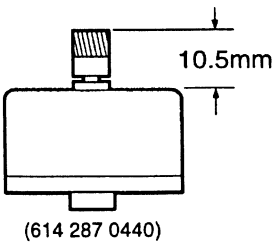
- Set the parts in such a way that the round marks on the two GEARS are horizontal.





11. TRAY HOLDER SLIDE

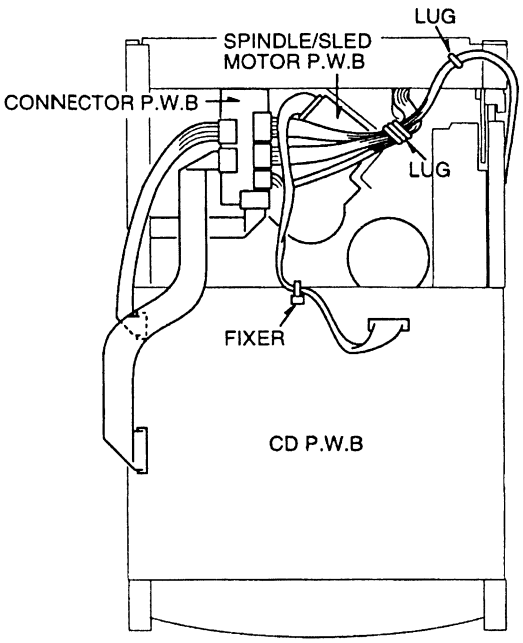


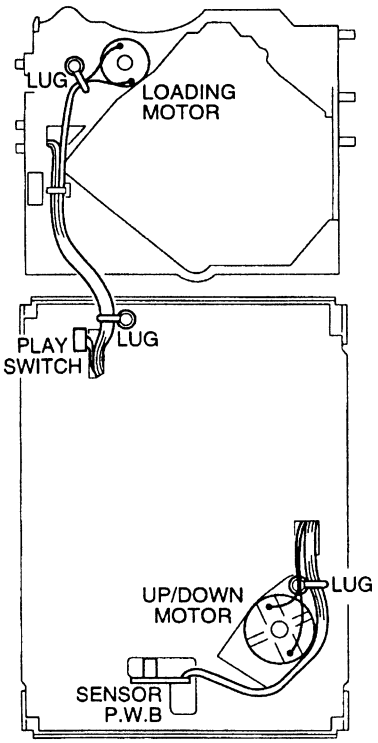


CD MECHANISM ADJUSTMENTS

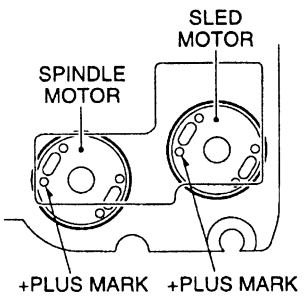
1. REPLACEMENT AND LUBRICATION OF THE CD MECHANISM

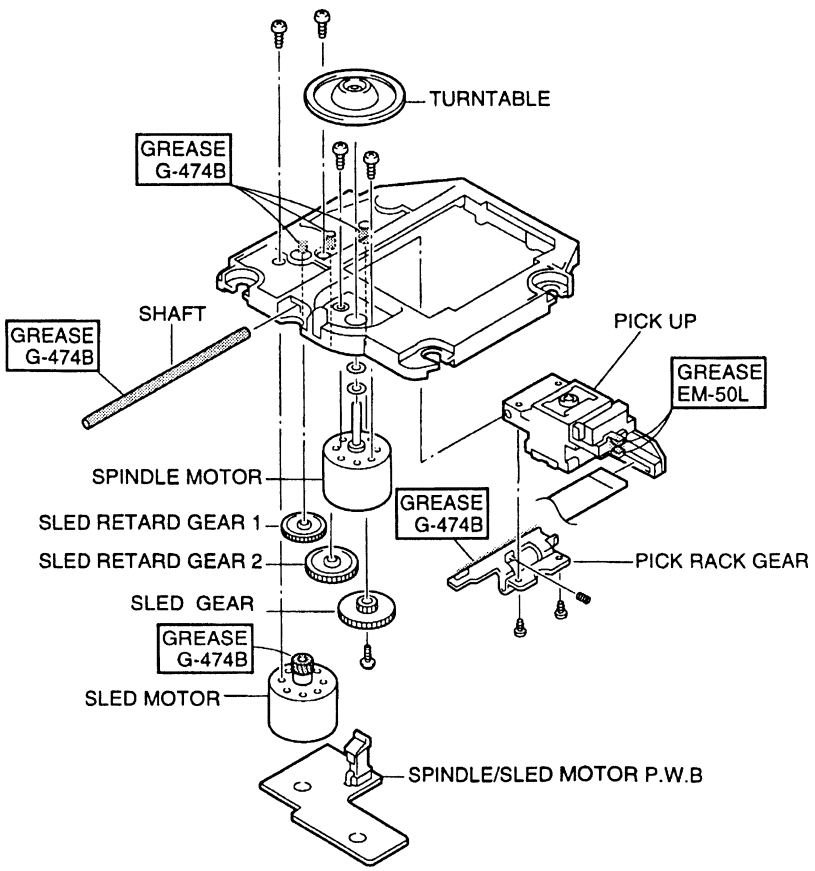
Note:	
EM-50L	MOLYKOTE, EM-50L
SG-7	SAN GREASE, SG-7
G-474B	FLOIL OIL, G-474B





2. CD BASE MECHANISM





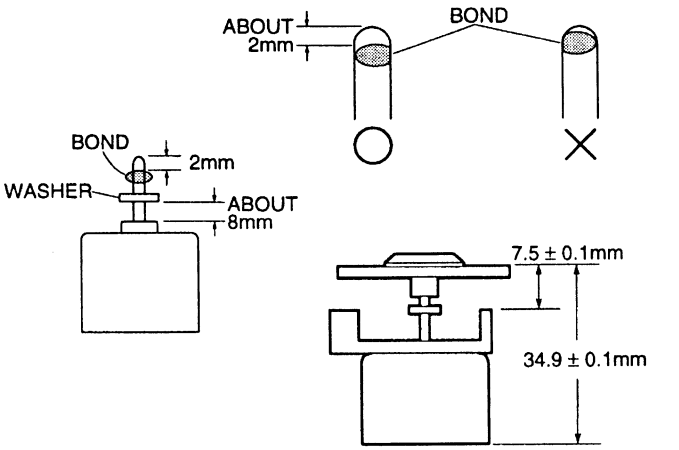
CD MECHANISM ADJUSTMENTS

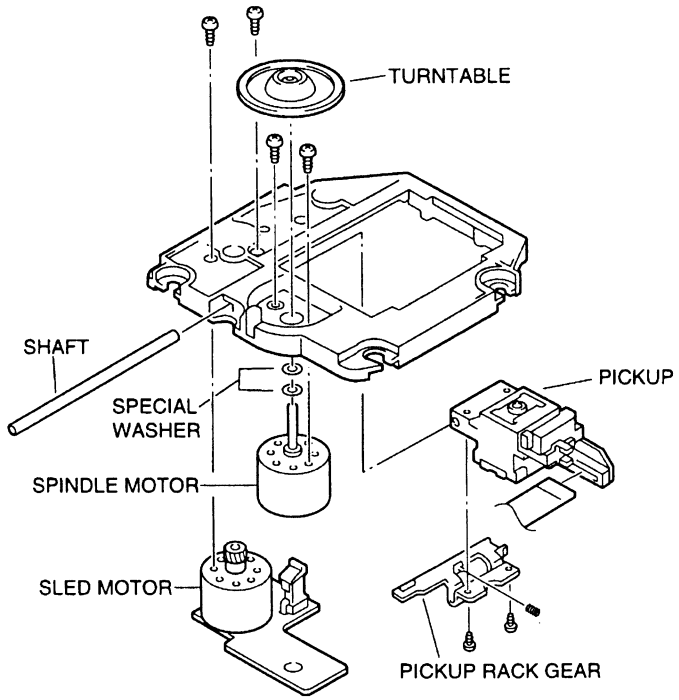
3. CD MECHANISM

(1) Replacement of the spindle motor

- First, prepare the new turntable and new special washer for replacement. The removed turntable will be deformed by the heat of the soldering iron, and cannot be reused.
- Prepare dial-type calipers.

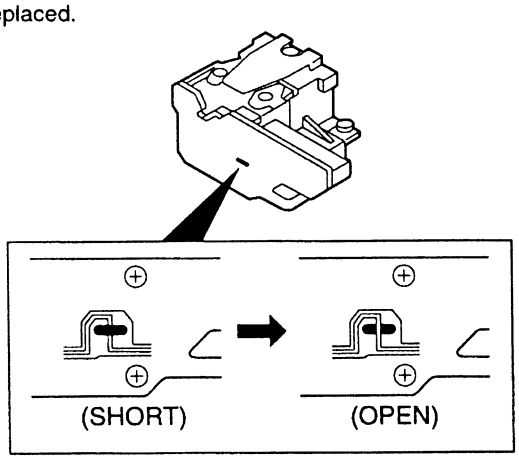
1. The attached bonding material can be dissolved by using a 60 W soldering iron to heat the shaft the upper part of the turntable for about one minute.
2. The turntable can then be removed from the shaft by very carefully applying force upward at the center of the lower surface of the turntable.
3. Remove the two screws and remove the spindle motor.
4. Attach the special washer top the spindle motor.
5. Clean the spindle motor's shaft. To clean them, use a soft cloth soaked in isopropyl alcohol.
6. Apply a small amount of a mixture of the " **Three bond 2001" and "2015F**" bonding materials to the motor's shaft.
7. Install the turntable as shown in the figure.
8. Secure the turntable by pressing gently. Be sure to wipe away (by using a piece of cloth, or similar material) any bonding material coming out of the hole.



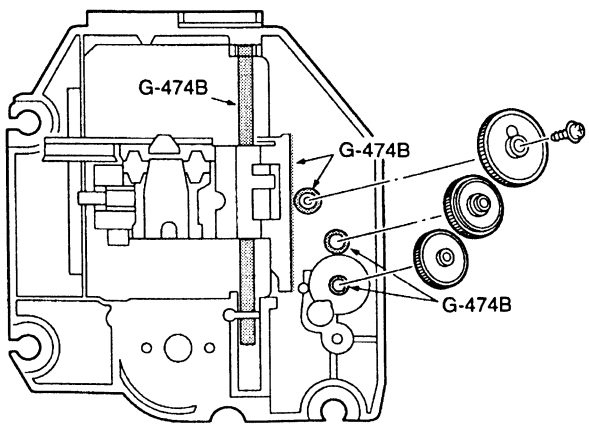


(2) Replacing the pick-up

1. Insert the pick-up rail into the base chassis.
2. If the rack of the base chassis are missing when the pick-up rail have been installed, first wipe the tips of the rail with alcohol.
3. After the pick-up has been replaced, apply grease **(FLOIL G-474B)** to the ▒▒▒ sections.
4. The pick-up P.W.Board pattern is **"shorted"**, as shown in the figure, so that the new pick-up will not be susceptible to the effects of static.
5. Set the pattern to **"open"** after the pick-up has been replaced.



(BE SURE AT THIS TIME, NOT TO TOUCH ANY OTHER PART.)



CD PICK UP MAINTENANCE

About pick-up (Optical lens) Cleaning

Clean the lens with the specified cleaning disc or moisten a cotton swab with isopropyl alcohol and cleaning paper.

Specified cleaning disc : LC-1 (Part code : 645 026 1961 ..... manufactured by SANYO.)

Regarding procedure of cleaning with moisten cotton swab, please refer to the attached as follows.

1. Cotton swab wrapped with Cleaning paper
2. Add the isopropyl alcohol
3. Gently move the tip of cotton swab just like a draw a whirlpool from inside to outside on the surface of lens.

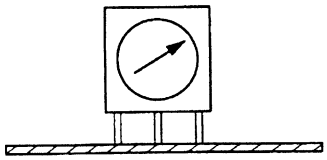
CD PLAYER ADJUSTMENTS

1. PREPARATION

Measuring instruments, tools and filter

1. Test disc. : YEDS 18 (SONY) or etc.
2. Oscilloscope : SS5711 (10MHz or dual-phenomenon) or Memoryscope : DSS6521 (Storagescope)
3. Screwdrivers (non-metallic) for adjustments

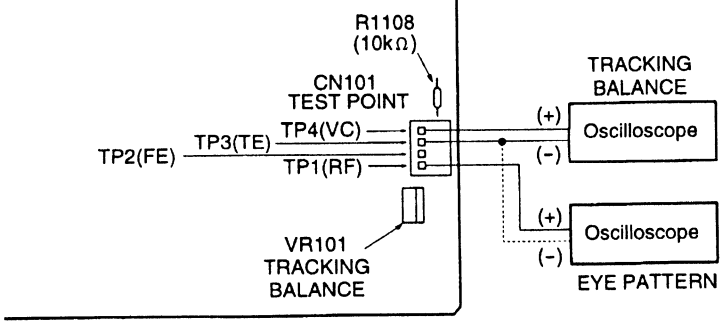
2. INITIALIZATION OF RV101



VR101 Initialization position

3. PARTS LOCATION

< OLD TYPE >



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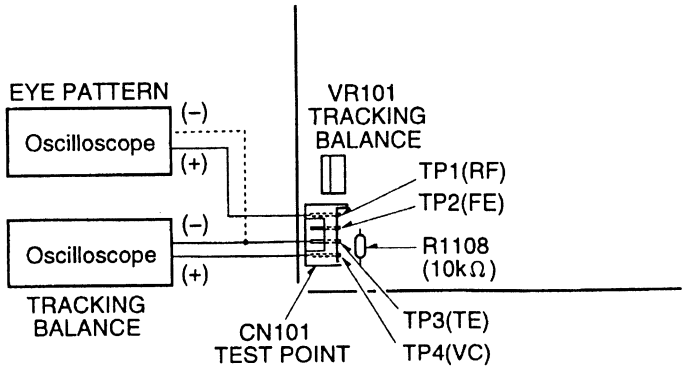


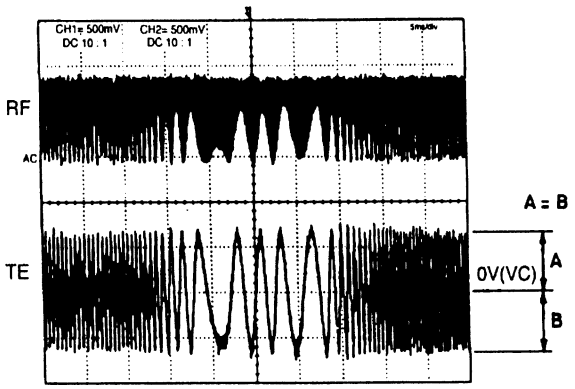
CD PLAYER ADJUSTMENTS

4. ADJUSTMENTS

Adjustment Item	Measuring instrument	Service mode	Output connection	Adjustment location	Adjustment value
(a) Tracking balance	Oscilloscope	yes	TP3 : TE TR4 : VC	VR101	Waveform symmetry A=B
(b) Checking the"eye" pattern	Oscilloscope	-	TP1 : RF TP4 : VC	-	Check be sure that the "eye" pattern is at the center of the waveform and that the diamond shape is clearly defined.

(1) Tracking balance adjustment

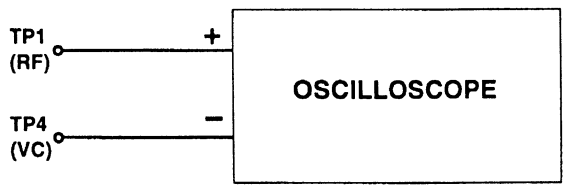
1. Connect an Oscilloscope to TP3 (TE) and TP4 (VC).
2. Turn "POWER" switch on.
3. Set the test disc. (DISC 1)
4. Press "SOUND PRESET" key and "FM MODE" key simultaneously .Within 1 second after pressing the "MEMORY" switch.
   (SERVICE MODE : Tracking balance adjustment mode)
5. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0V (VC).
6. If it cannot be adjusted by fully rotating VR101, cut the resistor R1108 (10kΩ) with a pair of pliers, and adjust again.
7. To cancel service mode, disconnect the power cord's plug from the electrical outlet.

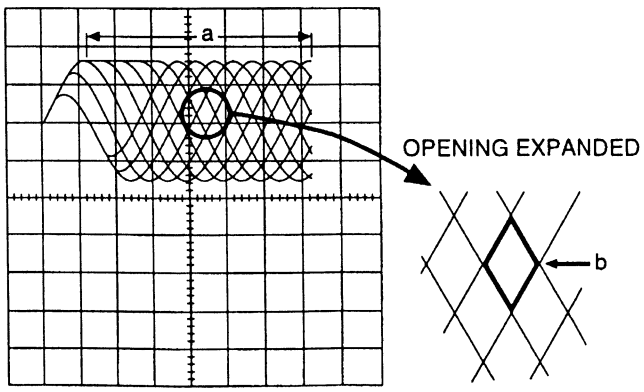


200mV/div.
5ms/div.

(2) Checking the "eye" pattern

1. Switch "ON" the POWER.
2. Connect an oscilloscope to TP1 (RF) and TP4 (VC).
3. Load the test disc.
4. PLAY switch push ON.
5. Check to be sure that the "eye" pattern is at the center of waveform and that the diamond shape is clearly defined.
6. Press the STOP button.
7. Switch "OFF" the POWER.





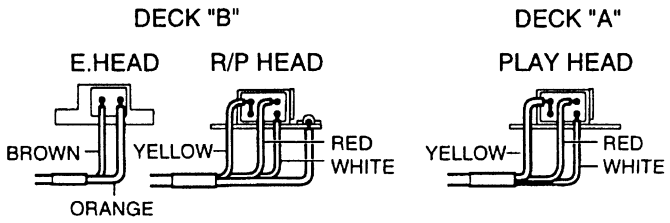
TAPE ADJUSTMENTS

Adjustment Item	Test Tape	Measuring Instrument	Output connection	Adjust location	Adjust value
(a) HEAD AZIMUTH DECK "A"	VTT738 etc. (10KHz)	AC-voltmeter	SPEAKER TERMINAL	HEAD AZIMUTH SCREW	Max.
(b) HEAD AZIMUTH DECK "B"	VTT738 etc. (10KHz)	AC-voltmeter	SPEAKER TERMINAL	HEAD AZIMUTH SCREW	Max.
(c) MOTOR SPEED (NORMAL)	MTT-111 (3,000Hz)	FREQUENCY COUNTER	SPEAKER TERMINAL	VR301	3,000Hz

1. HEAD REPLACEMENT AND AZIMUTH ADJUSTMENT

(1) Head replacement

1. After replacement, demagnetize the heads by using a degausser.
2. Be sure to clean the heads before attempting to make any adjustments.
3. Be sure both channels (1 and 2) are the same level. (Using a dual-channels oscilloscope).
4. All wiring should be returned to the original position after work is completed.



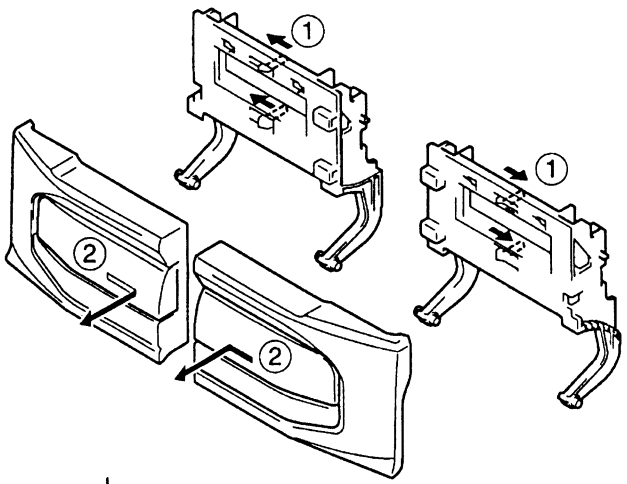
(2) Head azimuth

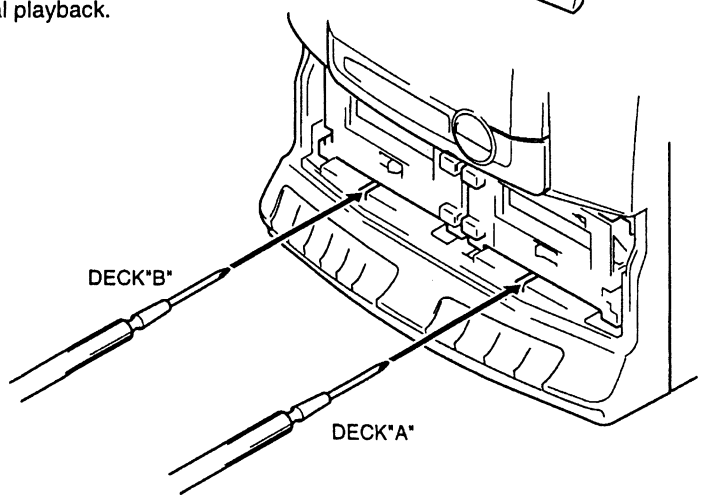
- DECK "A"

1. Remove the left side of CASSETTE LID.
2. Load a test tape (VTT-738, etc. :10KHz) for azimuth adjustment.
3. Press the PLAY button.
4. Use a flat-tip (-) screwdriver to turn the screw for normal azimuth adjustment so that the left and right outputs are maximized at the same phase during normal playback.
5. Press the STOP button

- DECK "B"

1. Remove the right side of CASSETTE LID.
2. Load a test for azimuth adjustment.
3. Press the PLAY button
4. Azimuth screw adjustment.
5. Press the STOP button.





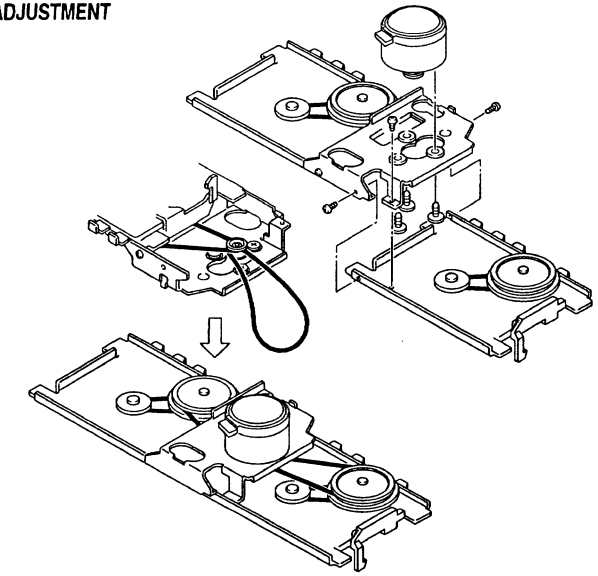
- After making the adjustment, secure the azimuth adjustment screw by applying screw lock (TB-1401B).

TAPE ADJUSTMENTS

2. MOTOR REPLACEMENT AND SPEED ADJUSTMENT

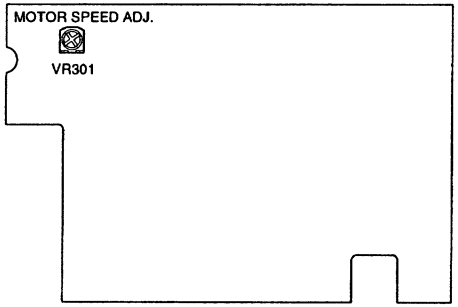
(1) Motor replacement

1. See illustration at right.



(2) Motor speed

1. Insert the test tape (MTT-111 or etc. 3,000 Hz) into DECK"A"
2. Press the PLAY button.
3. Adjust VR301 so that the frequency counter show a reading of 3,000Hz.
4. Press the STOP button.



3. CHECKING THE MECHANISM TORQUES

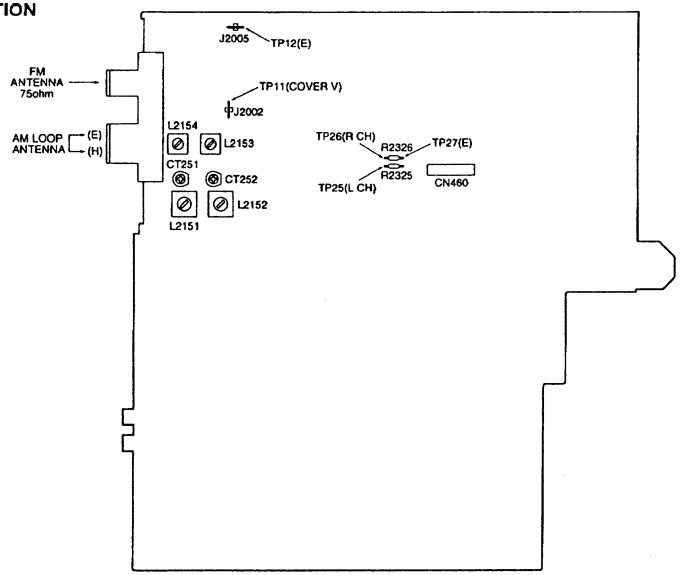
- Clean the head, capstan and pinch roller before making any measurement.

DECK " A & B"

Measureent	Take-up torque	Back tension	Tape tension
Cassette for measurement	PLAY : TW-2111A F.FWD/REW : TW-2231	PLAY : TW-2111A	Drive-power cassette TW-2412
PLAY	30 ~ 60gr.cm	2.0 ~ 5.0gr.cm	60 gr or more
F.FWD/REW	55 ~ 120gr.cm	-	-

TUNER ADJUSTMENTS

PARTS LOCATION



SG RF Level : 75Ω open Voltage dBμV
Antenna : 75Ω unbalanced , Modulation : 1 kHz
Dev. : ±22.5kHz(MONO) ±22.5KHz(STEREO) ±6.75KHz(PILOT)

1. FM

Step	Adjusting Circuit	Connection		SG Frequency	Set Position	Adjustment	Remark
		Input	Output				
1	Cover voltage	---	Connect Digital DC voltmeter to TP11(H), TP12(E).	87.5 MHZ	Low	---	more than 9.0 V
		---		108.0 MHZ	High	---	less than 9.0 V
2	Tracking	Connect FM SG to FM Antenna (SG=8dB μV)	Connect to VTVM TP25(L) or TP26(R), TP27(E)	90.0 MHZ	Low	---	Max.
				106.0 MHZ	High	---	

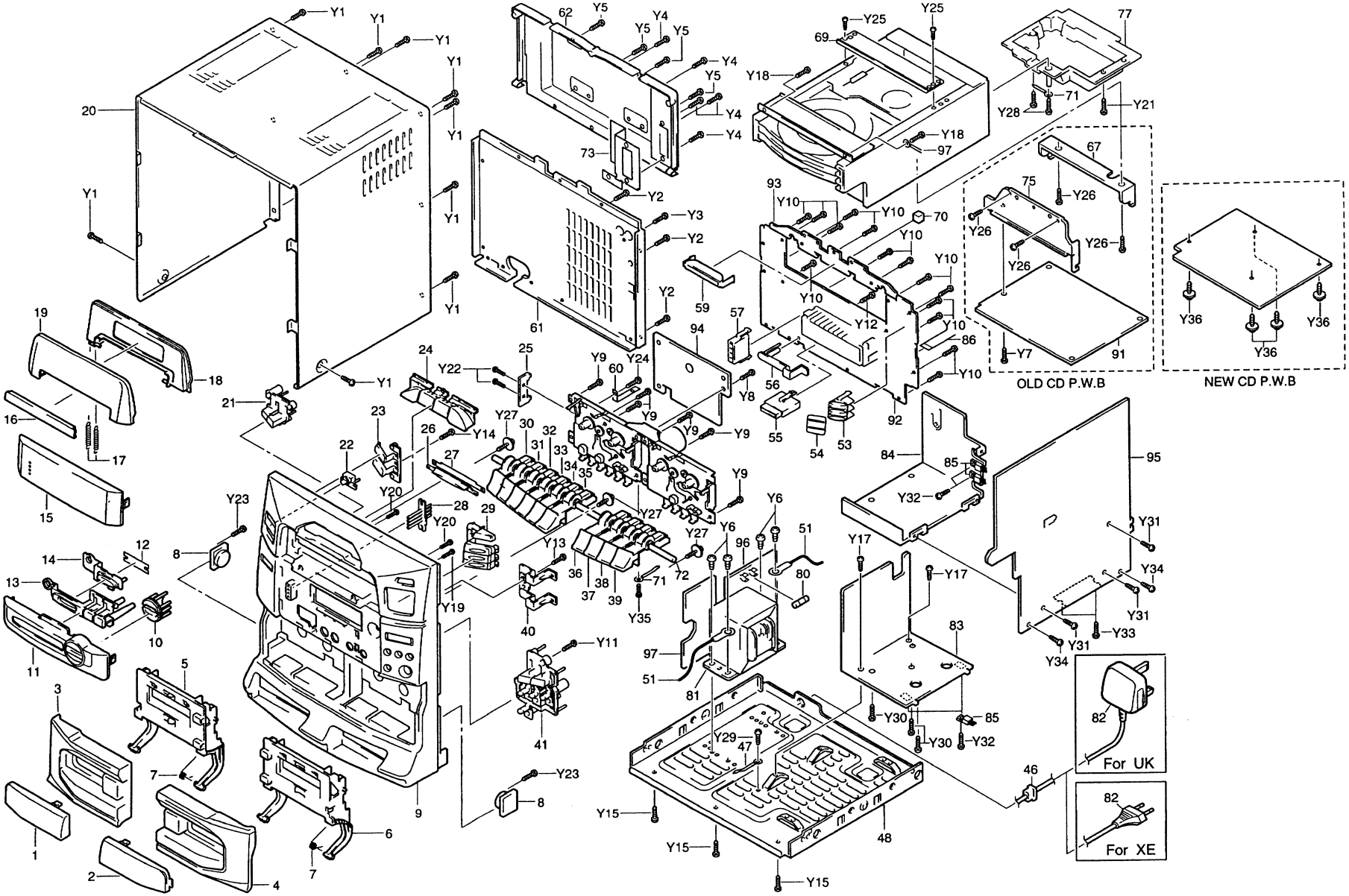
2. MW SG Modulation : 1kHz, 30% Antenna, IRE Loop, Distance : 60 cm

Step	Adjusting Circuit	Connection		SG Frequency	Set Position	Adjustment	Remark
		Input	Output				
1	Cover voltage	---	Connect Digital DC voltmeter to TP11(H), TP12(E).	522 kHZ	Low	L2153	1.0 ± 0.05 V
		---		1611 kHZ	High	---	less than 9.0 V
2	Tracking	Connect AM SG to Test loop Ant.(SG=80dB μV)	Connect to VTVM TP25(L) or TP26(R), TP27(E).	603 KHZ	Low	L2152	Max.
				1404 kHZ	High	CT152	

3. LW

Step	Adjusting Circuit	Connection		SG Frequency	Set Position	Adjustment	Remark
		Input	Output				
1	Cover voltage	---	Connect Digital DC voltmeter to TP11(H), TP12(E).	144 kHZ	Low	L2154	1.5 ± 0.05 V
		---		288 kHZ	High	---	less than 9.0 V
2	Tracking	Connect AM SG to Test loop Ant.(SG=85dB μV)	Connect to VTVM TP25(L) or TP26(R), TP27(E).	162 KHZ	Low	L2151	Max.
				279 kHZ	High	CT151	

EXPLODED VIEW (CABINET & CHASSIS)



PARTS LIST

PRODUCT SAFETY NOTICE

EACH PRECAUTION IN THIS MANUAL SHOULD BE FOLLOWED DURING SERVICING. COMPONENTS IDENTIFIED WITH THE IEC SYMBOL ⚠ IN THE PARTS LIST AND THE SCHEMATIC DIAGRAM DESIGNATED COMPONENTS IN WHICH SAFETY CAN BE OF SPECIAL SIGNIFICANCE. WHEN REPLACING A COMPONENT IDENTIFIED BY ⚠, USE ONLY THE REPLACEMENT PARTS DESIGNATED, OR PARTS WITH THE SAME RATINGS OF RESISTANCE, WATTAGE OR VOLTAGE THAT ARE DESIGNATED IN THE PARTS LIST IN THIS MANUAL. LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS MUST BE MADE TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE PRODUCT TO THE CUSTOMER.

CAUTION : Regular type resistors and capacitors are not listed. To know those values, refer to the schematic diagram.
Regular type resistors are less than 1/4 W carbon type and 0 ohm chip resistors.
Regular type capacitors are less than 50 V and less than 1000 µF type of Ceramic type and Electrical type.

PACKING & ACCESSORIES

REF.NO.	PART NO.	DESCRIPTION
	614 291 4120	CARTON CASE (UK)
	614 291 4717	CARTON CASE (XE)
	614 289 6242	CUSHION,TOP
	614 289 6235	CUSHION,BOTTOM
	645 024 3745	POLY SHEET,1300X550,SET (UK)
	645 024 4056	POLY SHEET,1300X550,SET (XE)
	614 231 6832	LABEL,SAFETY,CLASS 1
	614 281 1078	LABEL,CAUTION,SET TOP
	614 291 4212	LABEL,CAUTION, SHIPPING SCREW CAUTION
	614 293 6207	LABEL,CAUTION, SHIPPING SCREW CAUTION
	412 055 5204	SPECIAL SCREW-3.0X18.5, SHIPPING SCREW
	614 293 6221	FIXER (XE)
	614 291 4205	INSTRUCTION MANUAL (UK)
	614 291 4748	INSTRUCTION MANUAL (XE)
	645 005 1227	ASSY,ANTENNA,LOOP
	614 229 4635	ANTENNA
	645 025 1481	REMOCON,RB-F210XE
	614 285 3993	BATTERY COVER,REMOTE CONTROL
	614 293 0809	ASSY,BOX,SPEAKER,SX-F210/UK (UK)
	614 293 5859	ASSY,BOX,SPEAKER,SX-F210/XE (XE)

CABINET & CHASSIS

REF.NO.	PART NO.	DESCRIPTION
1	614 289 5603	DEC,WINDOW,CASSETTE,LEFT
2	614 289 5610	DEC,WINDOW,CASSETTE,RIGHT
3	614 291 3895	COVER,CASSETTE,LEFT
4	614 291 3901	COVER,CASSETTE,RIGHT
5	614 289 5832	LID,CASSETTE,LEFT
6	614 289 5849	LID,CASSETTE,RIGHT
7	614 289 6198	SPRING,WIRE,LID,CASSETTE
8	614 270 8316	ASSY,GEAR
9	614 294 0730	ASSY,CABINET,FRONT
10	614 291 3857	BUTTON,VOLUME
11	614 291 4045	PANEL,OPERATION
12	614 289 6129	DEC,SHEET,BUTTON,SOUND
13	614 291 3840	BUTTON,SOUND PRESET BASS XPANDER
14	614 291 3864	BUTTON,SOUND,SRS
15	614 289 5597	DEC,WINDOW,FL
16	614 291 3918	DEC,ESCUTCHEON,CHANGER
17	614 292 8448	SPRING TENS,DOOR,CD
18	614 289 5573	DOOR,CD
19	614 289 5580	DEC,WINDOW,DOOR
20	614 289 9212	ASSY,CABINET
21	614 291 3819	BUTTON,TUNING
22	614 289 5634	DEC,WINDOW,STANDBY
23	614 293 6801	BUTTON,POWER,POWER/FUNCTION
24	614 291 3796	BUTTON,CD,OPERATION
25	614 270 8408	HOLDER,DECK PWB
26	614 289 5627	DEC,WINDOW,CD,DOOR, ILLUMINATION
27	614 289 6105	DEC,SHEET,DOOR,LIGHT
28	614 289 8437	DEC,WINDOW,LED,SOUND PRESET
29	614 294 2642	ASSY,BUTTON,CHANGER
30	614 291 3925	KNOB,LEVER,B-MECHA,REC
31	614 291 3932	KNOB,LEVER,B-MECHA,PLAY
32	614 291 3949	KNOB,LEVER,B-MECHA,REW
33	614 291 3956	KNOB,LEVER,B-MECHA,FWD
34	614 291 3963	KNOB,LEVER,B-MECHA,STOP
35	614 291 3970	KNOB,LEVER,B-MECHA,PAUSE
36	614 291 3987	KNOB,LEVER,A-MECHA,PLAY
37	614 291 3994	KNOB,LEVER,A-MECHA,REW
38	614 291 4007	KNOB,LEVER,A-MECHA,FWD
39	614 291 4014	KNOB,LEVER,A-MECHA,STOP
40	614 289 5719	HINGE,BUTTON,VOLUME
41	614 291 3833	BUTTON,TUNER, PRESET/TUNING/BAND/ETC.
46	614 129 1901	FIXER,AC CODE
or	614 284 1884	FIXER,AC CORD
47	614 130 0382	LUG,BOTTOM-LEAD
48	614 289 5443	ASSY,CABINET,BOTTOM
53	614 289 5894	REFLECTOR,BUTTON,CAHNGER
54	614 289 6112	DEC,SHEET,BUTTON,CHANGER
55	614 289 5887	REFLECTOR,BUTTON,SOUND
56	614 289 5702	HINGE,BUTTON,SOUND
57	614 289 8482	REFLECTOR,LED,SOUND,PRESET
59	614 289 5870	REFLECTOR,DOOR,LIGHT
60	614 270 8484	SPRING,PLATE,REC
61	614 291 4038	PANEL,REAR (UK)
61	614 291 4601	PANEL,REAR (XE)
62	614 291 4625	PANEL,REAR,CD MECHA
67	614 289 6143	MOUNTING,CD PWB
69	614 266 1918	JOINT,CHANGER MECHA
70	614 125 6443	CUSHION,FRONT LEAD FIX
71	614 129 9136	LUG,MECHA LEAD FIX
72	614 289 6181	SHAFT,KNOB,LEVER,CASSETTE
73	614 289 6211	TERMINAL,ANT,PANEL REAR
75	614 289 5856	MOUNTING,CD PWB
77	614 291 8050	COVER PICK,CD
	614 191 3698	LABEL,LASER MARK
	614 276 2844	LABEL,SAFETY,LASER CAUTION
	614 208 0986	CUSHION,MECHA LEAD FIX

PARTS LIST

FIXING PARTS

REF.NO.	PART NO.	DESCRIPTION
Y1	411 021 3701	SCR S-TPG BIN 3X10,CABINET
Y2	411 021 3701	SCR S-TPG BIN 3X10,BOTTOM-REAR
Y3	411 021 3701	SCR S-TPG BIN 3X10,VIDEO IN
Y4	411 021 3701	SCR S-TPG BIN 3X10, REAR-REAR/EXT.ANT
Y5	411 021 3701	SCR S-TPG BIN 3X10, MECHA CD-REAR
Y6	411 001 3905	SCR S-TPG BIN 4X6,TRANS
Y7	411 021 3503	SCR S-TPG BIN 3X10,CD,PWB-MOUNT
Y8	411 021 3503	SCR S-TPG BIN 3X10, DECK-PWB/MECHA
Y9	411 021 3503	SCR S-TPG BIN 3X10,TAPE MECHA
Y10	411 021 3503	SCR S-TPG BIN 3X10,FRONT PWB
Y11	411 021 3503	SCR S-TPG BIN 3X10,BUTTON,TUNER
Y12	411 021 3503	SCR S-TPG BIN 3X10, HINGE,BUTTON,SOUND
Y13	411 021 3503	SCR S-TPG BIN 3X10, HINGE,BUTTON,VOLUME
Y14	411 021 3503	SCR S-TPG BIN 3X10, BUTTON POWER
Y15	411 021 3503	SCR S-TPG BIN 3X10,BOTTOM-FRONT
Y17	411 021 3503	SCR S-TPG BIN 3X10, HEAT SINK-REAR
Y18	411 021 3503	SCR S-TPG BIN 3X10, MECHA CD-FR OUT
Y19	411 165 3803	SCR S-TPG BIN 2.3X10, PANEL,OPERATION
Y20	411 165 3803	SCR S-TPG BIN 2.3X10, DEC,ESCUTCHEON,CHANGER
Y21	411 001 1901	SCR S-TPG BIN 3X6,COVER PICK FIX
Y22	411 024 3708	SCR S-TPG PAN+FLG 2X6, HOLDER DECK PWB
Y23	412 032 6408	SPECIAL SCREW,GEAR,CASSETTE
Y24	411 028 2806	SCR S-TPG PAN 2X3, SPRING PLATE FOR REC
Y25	411 028 2905	SCR S-TPG PAN 2X4, JOINT-CD MECHA
Y26	411 020 9902	SCR S-TPG BRZ+FLG 3X8, MOUNT,PWB-CD MECHA
Y27	411 020 9407	SCR S-TPG BRZ+FLG 3X14, SHAFT,KNOB,LEVER
Y28	411 021 3503	SCR S-TPG BIN 3X10,COVER PICK FIX
Y29	411 021 5705	SCR S-TPG BIN 3X6,BOTTOM-LUG
Y30	411 021 6405	SCR S-TPG BIN 3X8,HEAT-HEAT
Y31	411 020 9902	SCR S-TPG BRZ+FLG 3X8, PWB-HEAT SINK
Y32	411 021 6405	SCR S-TPG BIN 3X8,TRANSISTOR
Y33	411 020 9100	SCR S-TPG BRZ+FLG 3X12,POWER IC
Y34	411 020 9902	SCR S-TPG BRZ+FLG 3X8, AMP PWB-BOTTOM
Y35	411 024 3708	SCR S-TPG PAN+FLG 2X6
Y36	411 020 9902	SCR S-TPG BRZ+FLG 3X8, PWB-CD MECHA

ELECTRICAL PART

REF.NO.	PART NO.	DESCRIPTION
80	⚠ 423 016 9902	FUSE 250V 0.8A
81	⚠ 645 024 6074	TRANS,POWER,AC120V 60HZ
82	⚠ 645 008 9732	POWER CORD (UK)
or	⚠ 645 005 7120	POWER CORD (UK)
82	⚠ 614 255 2513	POWER CORD (XE)
or	⚠ 614 023 3148	POWER CORD (XE)
or	⚠ 614 233 8971	POWER CORD (XE)
or	⚠ 645 016 9939	POWER CORD (XE)
83	614 292 3931	HEAT SINK,POWER AMP
84	614 265 7034	HEAT SINK,POWER AMP
85	405 095 1602	TR 2SD2061-E,MAIN POWER+B
or	405 095 1701	TR 2SD2061-F,MAIN POWER+B
or	405 138 6403	TR KTD2058Y,MAIN POWER+B
86	645 025 1405	FLEXIBLE FLAT CABLE,FRONT-CD
	614 293 3275	ASSY,WIRE,P HEAD (CN381)
	614 293 3282	ASSY,WIRE,R/P HEAD (CN382)
	614 261 5249	ASSY,WIRE,C-MECHA SW (CN383)

CD P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
91	614 291 5226	ASSY,PWB,CD (OLD TYPE)
91	614 294 2666	ASSY,PWB,CD (NEW TYPE)
CN101	645 006 0915	PLUG,4P,TP1-4
CN111	645 010 1472	SOCKET,FPC 13P,PICKUP
CN113	645 005 8127	PLUG,6P,BASE MECHA
CN114	645 012 2736	SOCKET,DIP 8P
CN115	614 035 4935	SOCKET,DIP 4P
CN124	614 291 6896	CORD,8P CONNECTOR,CD MECHA (OLD TYPE ONLY)
CN124	614 294 0754	ASSY,WIRE,8P,CD MECHA (NEW TYPE ONLY)
CN125	614 291 6889	CORD,4P CONNECTOR, CD MECHA (OLD TYPE ONLY)
CN125	614 294 0761	ASSY,WIRE,4P,CD MECHA (NEW TYPE ONLY)
CN131	645 012 5201	SOCKET,FPC 16P,FRONT
or	645 005 4242	SOCKET,16P,FRONT
CN198	645 005 9292	PLUG,5P,AMP
D1350	407 007 9904	DIODE GMA01 (NEW TYPE ONLY)
or	407 012 4406	DIODE 1SS133 (NEW TYPE ONLY)
or	407 012 5809	DIODE 1SS176 (NEW TYPE ONLY)
or	407 153 6109	DIODE 1SS119-041 (NEW TYPE ONLY)
D1351	407 099 5402	ZENER DIODE MTZJ6.2B
D1361	407 099 5105	ZENER DIODE MTZJ4.7B,LOADING-M
D1371	407 099 4504	ZENER DIODE MTZJ3.9A,OPN/CLS-M
D1601	⚠ 407 004 9709	DIODE DSK10C
D1602	⚠ 407 004 9709	DIODE DSK10C
D1603	⚠ 407 004 9709	DIODE DSK10C
D1604	⚠ 407 004 9709	DIODE DSK10C
IC101	409 327 3402	IC CXA1782BQ
IC102	⚠ 409 317 8509	IC BA6398FP
IC104	409 386 7502	IC CXD2508AQ
IC106	409 039 7408	IC NJM4558D
or	409 018 4305	IC LA6458D
IC131	⚠ 409 408 1402	IC LB1648L
IC132	⚠ 409 408 1303	IC LB1641L
L1401	645 001 4550	INDUCTOR,10U K
LG101	645 023 8987	FIXER
PR161	⚠ 645 014 2468	PROTECTOR,0.63A 125V
PR162	⚠ 645 014 2468	PROTECTOR,0.63A 125V
PR191	⚠ 645 014 2499	PROTECTOR,0.4A 125V
PR199	⚠ 645 014 2536	PROTECTOR,1.5A 125V
Q1101	405 008 6809	TR 2SB808-F-SPA
or	405 008 7202	TR 2SB810-E
or	405 008 7301	TR 2SB810-F
Q1102	405 008 6809	TR 2SB808-F-SPA
or	405 008 7202	TR 2SB810-E
or	405 008 7301	TR 2SB810-F
Q1201	405 009 5207	TR 2SB927-S
or	405 001 9302	TR 2SA1020-Y
or	405 141 3604	TR KTA1273-Y
Q1202	405 008 6809	TR 2SB808-F-SPA
or	405 008 7202	TR 2SB810-E
or	405 008 7301	TR 2SB810-F
Q1211	405 000 3806	TR DTC114YS
or	405 128 9001	TR RN1207
or	405 037 0809	TR 2SC4048

PARTS LIST

REF.NO.	PART NO.	DESCRIPTION
Q1321	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
or	405 012 2002	TR 2SC1815-GR
Q1351	405 000 0508	TR DTA114ES
or	405 078 2305	TR BN1A4M
or	405 001 1108	TR RN2202
Q1361	405 000 0508	TR DTA114ES
or	405 078 2305	TR BN1A4M
or	405 001 1108	TR RN2202
Q1371	405 000 0508	TR DTA114ES
or	405 078 2305	TR BN1A4M
or	405 001 1108	TR RN2202
R1350	⚠ 402 072 1600	RESISTOR 10 J- 1W
R1371	⚠ 402 072 1600	RESISTOR 10 J- 1W
VR101	645 010 7597	VR,SEMI,47K N
X1401	614 254 6932	RESONATOR,CERAMIC
or	614 259 2137	RESONATOR,CERAMIC

Note : From New CD P.W.B. to Old P.W.B. is interchangeable, but from Old CD P.W.B. to New CD P.W.B. can not interchange for use.
If you want to use Old CD P.W.B.at New CD P.W.B., please prepare the mounting brackets (Ref. No.67 & 75).
(See EXPLODED VIEW (CABINET & CHASSIS) Page 16 - 17).

FRONT P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
92	614 291 5257	ASSY,PWB,FRONT
BR601	614 289 5726	HOLDER,FL
C6003	403 196 4102	ELECT 1000U M 6.3V
or	403 325 0401	ELECT 1000U M 6.3V
C6005	403 262 8607	DL-ELECT 0.047F Z 5.5V
or	403 304 4802	DL-ELECT 0.047F Z 5.5V
CN601	645 009 0080	PLUG,16P,AMP/TUNER
CN602	614 035 4928	SOCKET,DIP 3P,TP2
CN603	645 012 5201	SOCKET,FPC 16P.CD
or	645 005 4242	SOCKET,16P,CD
CN604	614 292 3207	CORD,1P CONNECTOR,AMP
CN612	614 288 9480	CORD,3P CONNECTOR,PT2
D6001	407 012 4406	DIODE 1SS133
D6004	407 012 4406	DIODE 1SS133
D6005	407 099 4603	ZENER DIODE MTZJ3.9B
D6011	408 034 8700	LED SLZ-981C-13H-AB-T2,STANDBY
D6012	408 034 9202	LED SLZ-481C-13H-AB-T2,SRS
D6013	408 034 9202	LED SLZ-481C-13H-AB-T2,SRS
D6014	408 037 4204	LED SLP-3118B-51HAB-T1,DISC
D6015	408 037 4204	LED SLP-3118B-51HAB-T1,DISC
D6016	408 037 4204	LED SLP-3118B-51HAB-T1,DISC
D6017	408 034 8700	LED SLZ-981C-13H-AB-T2,SOUND
D6018	408 034 8700	LED SLZ-981C-13H-AB-T2,SOUND
D6019	408 034 8700	LED SLZ-981C-13H-AB-T2,SOUND
D6020	408 034 8700	LED SLZ-981C-13H-AB-T2,SOUND
D6101	407 012 4406	DIODE 1SS133
D6102	407 012 4406	DIODE 1SS133
D6103	407 012 4406	DIODE 1SS133
D6104	407 012 4406	DIODE 1SS133
DS601	408 035 6101	PHOTO DIODE PIC-21043TE3
FL601	645 023 5849	FLOURESCENT TUBE,FL
IC601	410 287 3302	IC M38174M8-290FP
L6001	645 001 4550	INDUCTOR,10U K
Q6001	405 006 1905	TR 2SA933S-S
or	405 006 1806	TR 2SA933S-R
or	405 002 1305	TR 2SA1048-Y
or	405 002 1107	TR 2SA1048-GR
or	405 057 7604	TR 2SA1175-FF
or	405 002 5402	TR 2SA1175-EF
Q6002	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
or	405 012 2002	TR 2SC1815-GR
Q6003	405 006 1905	TR 2SA933S-S
or	405 006 1806	TR 2SA933S-R
or	405 002 1305	TR 2SA1048-Y
or	405 002 1107	TR 2SA1048-GR
or	405 057 7604	TR 2SA1175-FF
or	405 002 5402	TR 2SA1175-EF
Q6004	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
or	405 012 2002	TR 2SC1815-GR
Q6011	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
or	405 012 2002	TR 2SC1815-GR
Q6012	405 000 3806	TR DTC114YS
or	405 037 0809	TR 2SC4048
or	405 128 9001	TR RN1207
Q6014	405 000 3806	TR DTC114YS
or	405 037 0809	TR 2SC4048
or	405 128 9001	TR RN1207
Q6015	405 000 3806	TR DTC114YS
or	405 037 0809	TR 2SC4048
or	405 128 9001	TR RN1207
Q6016	405 000 3806	TR DTC114YS
or	405 037 0809	TR 2SC4048
or	405 128 9001	TR RN1207
S6006	614 220 5433	SWITCH,TACT,DISC 1
or	614 240 0982	SWITCH,TACT
S6007	614 220 5433	SWITCH,TACT,DISC 2
or	614 240 0982	SWITCH,TACT
S6008	614 220 5433	SWITCH,TACT,DISC 3
or	614 240 0982	SWITCH,TACT
S6009	614 220 5433	SWITCH,TACT,OPEN/CLOSE
or	614 240 0982	SWITCH,TACT
S6010	614 220 5433	SWITCH,TACT,POWER
or	614 240 0982	SWITCH,TACT
S6011	614 220 5433	SWITCH,TACT,FUNCTION
or	614 240 0982	SWITCH,TACT
S6013	614 220 5433	SWITCH,TACT,BASS
or	614 240 0982	SWITCH,TACT
S6014	614 220 5433	SWITCH,TACT,SOUND
or	614 240 0982	SWITCH,TACT
S6015	614 220 5433	SWITCH,TACT,SRS
or	614 240 0982	SWITCH,TACT
S6016	614 220 5433	SWITCH,TACT,DUB/BEAT
or	614 240 0982	SWITCH,TACT
S6017	614 220 5433	SWITCH,TACT,PRESET+
or	614 240 0982	SWITCH,TACT
S6018	614 220 5433	SWITCH,TACT,PRESET-
or	614 240 0982	SWITCH,TACT
S6019	614 220 5433	SWITCH,TACT,MEMORY
or	614 240 0982	SWITCH,TACT
S6020	614 220 5433	SWITCH,TACT,TU BAND
or	614 240 0982	SWITCH,TACT
S6021	614 220 5433	SWITCH,TACT,FM MODE
or	614 240 0982	SWITCH,TACT
S6022	614 220 5433	SWITCH,TACT,VOL UP
or	614 240 0982	SWITCH,TACT
S6023	614 220 5433	SWITCH,TACT,VOL DOWN
or	614 240 0982	SWITCH,TACT
S6024	614 220 5433	SWITCH,TACT,TU+
or	614 240 0982	SWITCH,TACT
S6025	614 220 5433	SWITCH,TACT,TU-
or	614 240 0982	SWITCH,TACT
TA601	614 112 1444	DOUBLE FACE,DOUBLEFACE
X6001	614 215 5523	RESONATOR,CERAMIC,4.19MHZ
or	614 215 5561	RESONATOR,CERAMIC,4.19MHZ
or	645 013 7532	OSC,CERAMIC 4.19MHZ
X6002	614 252 7627	RESONATOR,XTAL,32.768KHZ

PARTS LIST

SWITCH P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
93	614 290 0116	ASSY,PWB,SWITCH
LG621	614 129 9068	LUG
LP621	614 046 0094	LAMP
S6201	614 220 5433	SWITCH,TACT,FWD SKIP
or	614 240 0982	SWITCH,TACT
S6202	614 220 5433	SWITCH,TACT,BACK SKIP
or	614 240 0982	SWITCH,TACT
S6203	614 220 5433	SWITCH,TACT,PLAY PAUSE
or	614 240 0982	SWITCH,TACT
S6204	614 220 5433	SWITCH,TACT,STOP
or	614 240 0982	SWITCH,TACT

DECK P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
94	614 290 0031	ASSY,PWB,DECK
C3603	403 058 9504	POLYESTER 0.018U J 50V
C3604	403 062 0009	POLYESTER 0.047U J 50V
C3605	403 061 1809	POLYESTER 3900P J 50V
CN301	645 005 8141	PLUG,9P,AMP/TUNER
CN302	614 229 3430	PLUG,5P,AMP/TUNER
CN303	645 005 8127	PLUG,6P,TAPE MECHA
CN304	614 020 6562	SOCKET,4P,TAPE MECHA
or	614 223 9223	SOCKET,4P,TAPE MECHA
CN371	645 005 8110	PLUG,4P,PLAY HEAD
CN372	645 005 8127	PLUG,6P,R/P,E HEAD
D3101	407 012 4406	DIODE 1SS133
D3102	407 012 4406	DIODE 1SS133
D3103	407 012 4406	DIODE 1SS133
D3111	407 012 4406	DIODE 1SS133
D3300	407 012 4406	DIODE 1SS133
IC371	409 251 1000	IC TA8189N
L3601	645 010 7177	TRANS,OSC,85KHZ
L3701	645 004 0580	INDUCTOR,1M J
L3801	645 004 0580	INDUCTOR,1M J
Q3101	405 005 2002	TR 2SA733-P
or	405 005 1906	TR 2SA733-K
or	405 001 7001	TR 2SA1015-GR
Q3102	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
or	405 012 2002	TR 2SC1815-GR
or	405 141 3307	TR KTC3198-GR
or	405 141 3208	TR KTC3198-Y
Q3104	405 000 3103	TR DTC114ES
or	405 078 2909	TR BA1A4M
or	405 001 0200	TR RN1202
or	405 109 9204	TR KRC102M-A
Q3106	405 000 0508	TR DTA114ES
or	405 078 2305	TR BN1A4M
or	405 001 1108	TR RN2202
or	405 110 5400	TR KRA102M-A
Q3601	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
or	405 012 2002	TR 2SC1815-GR
Q3602	405 011 1907	TR 2SC1627-Y
Q3701	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
or	405 012 2002	TR 2SC1815-GR
or	405 141 3307	TR KTC3198-GR
or	405 141 3208	TR KTC3198-Y
Q3702	405 000 3103	TR DTC114ES
or	405 078 2909	TR BA1A4M
or	405 001 0200	TR RN1202
or	405 109 9204	TR KRC102M-A
Q3801	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
or	405 012 2002	TR 2SC1815-GR
or	405 141 3307	TR KTC3198-GR
or	405 141 3208	TR KTC3198-Y
Q3802	405 000 3103	TR DTC114ES
or	405 078 2909	TR BA1A4M
or	405 001 0200	TR RN1202
or	405 109 9204	TR KRC102M-A
R3902	⚠ 402 071 7207	FUSIBLE RES 100 JA 1/4W
R3971	⚠ 402 071 0307	FUSIBLE RES 10 JA 1/4W
S3000	614 248 9642	SWITCH,SLIDE
VR301	645 003 5579	VR,SEMI,2.2K N

AMPLIFIER-TUNER P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
95	614 291 6209	ASSY,PWB,AMP-TUNER
C2152	403 082 0201	POLYPRO 470P J 100V
C2155	403 082 2205	POLYPRO 560P J 100V
C2457	403 106 1603	NP-ELECT 1U Q 50V
C4147	403 067 7300	MT-COMPO 0.33U J 50V
C4154	403 067 7805	MT-COMPO 0.47U J 50V
C4598	403 067 5603	MT-COMPO 0.1U J 50V
C4697	403 059 5000	POLYESTER 0.022U J 50V
C4701	403 067 5603	MT-COMPO 0.1U J 50V
C4705	403 067 5603	MT-COMPO 0.1U J 50V
C4706	403 067 5603	MT-COMPO 0.1U J 50V
C4708	403 056 9506	POLYESTER 0.01U J 50V
C4709	403 056 9506	POLYESTER 0.01U J 50V
C4805	403 067 5603	MT-COMPO 0.1U J 50V
C4806	403 067 5603	MT-COMPO 0.1U J 50V
C4808	403 056 9506	POLYESTER 0.01U J 50V
C4809	403 056 9506	POLYESTER 0.01U J 50V
C4912	403 189 4706	ELECT 4700U M 35V
or	403 325 2306	ELECT 4700U M 35V
C4913	403 197 7300	ELECT 1000U M 25V
or	403 323 5408	ELECT 1000U M 25V
CN201	614 255 5750	TERMINAL
CN450	645 009 0165	SOCKET,16P,FRONT
CN451	614 035 4942	SOCKET,DIP 5P,CD
or	614 237 9783	SOCKET,5P,CD
CN452	614 260 7411	SOCKET,VIDEO
CN460	645 012 2743	SOCKET,DIP 9P,DECK
or	614 249 3847	SOCKET,9P,DECK
CN461	614 035 4942	SOCKET,DIP 5P,DECK
or	614 237 9783	SOCKET,5P,DECK
CN462	614 254 3597	TERMINAL
or	614 221 8273	TERMINAL
CN470	645 006 1875	PLUG,2P,SPEAKEROUT
CN479	645 006 1141	JACK,PHONE D6.43,HEADPHONE
CN480	645 006 1875	PLUG,2P,SPEAKEROUT
CN483	614 288 9473	CORD,5P CONNECTOR,CD
CN484	614 290 0567	CORD,5P CONNECTOR,DECK
CN485	614 290 0574	CORD,9P CONNECTOR,DECK
CN491	614 020 1239	SOCKET,4P,PT2
CT251	645 004 2317	TRIMMER,30PF
CT252	614 007 6356	TRIMMER
D2151	407 091 5004	VARACTOR DI SVC321SPA-C-2
D2152	407 091 5004	VARACTOR DI SVC321SPA-C-2
D2451	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
or	407 012 5809	DIODE 1SS176
or	407 153 6109	DIODE 1SS119-041
D2454	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
or	407 012 5809	DIODE 1SS176
or	407 153 6109	DIODE 1SS119-041

PARTS LIST

REF.NO.	PART NO.	DESCRIPTION
D2455	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
or	407 012 5809	DIODE 1SS176
or	407 153 6109	DIODE 1SS119-041
D2456	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
or	407 012 5809	DIODE 1SS176
or	407 153 6109	DIODE 1SS119-041
D2461	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
or	407 012 5809	DIODE 1SS176
or	407 153 6109	DIODE 1SS119-041
D2463	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
or	407 012 5809	DIODE 1SS176
or	407 153 6109	DIODE 1SS119-041
D2464	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
or	407 012 5809	DIODE 1SS176
or	407 153 6109	DIODE 1SS119-041
D4470	407 012 4406	DIODE 1SS133
D4471	407 099 5402	ZENER DIODE MTZJ6.2B
D4710	407 012 4406	DIODE 1SS133
D4910	407 012 4406	DIODE 1SS133
D4911	407 012 4406	DIODE 1SS133
D4912	407 099 7604	ZENER DIODE MTZJ18B
D4913	407 012 4406	DIODE 1SS133
D4930	407 012 4406	DIODE 1SS133
D4960	407 099 6805	ZENER DIODE MTZJ13B
D4970	407 012 4406	DIODE 1SS133
IC231	409 379 2705	IC LA1832ML
IC245	409 378 4205	IC LC72131MD
IC413	409 393 4808	IC SRS5250S
IC414	409 211 6601	IC NJM4558L
IC450	409 353 8709	IC BU4052BCF
IC451	409 211 6601	IC NJM4558L
IC458	409 344 3607	IC BH3854AFS
IC471	⚠ 409 343 3608	IC LA4705NA
IC497	⚠ 409 145 2809	IC NJM7805FA
or	⚠ 409 396 8704	IC KIA7805PI
L2151	614 255 5798	TRANS,RF
L2152	614 255 5781	TRANS,RF
L2153	614 255 5767	TRANS,OSC
L2154	614 255 5774	TRANS,OSC
L2301	645 004 0580	INDUCTOR,1M J
L2451	645 001 4581	INDUCTOR,100U K
LG403	645 023 8987	FIXER
LG404	645 023 8987	FIXER
PR497	⚠ 645 014 2499	PROTECTOR,0.4A 125V
Q2140	405 141 3307	TR KTC3198-GR
or	405 141 3208	TR KTC3198-Y
or	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
Q2152	405 141 3307	TR KTC3198-GR
or	405 141 3208	TR KTC3198-Y
or	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
Q2153	405 141 3307	TR KTC3198-GR
or	405 141 3208	TR KTC3198-Y
or	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
Q2154	405 141 3307	TR KTC3198-GR
or	405 141 3208	TR KTC3198-Y
or	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
Q2155	405 141 3307	TR KTC3198-GR
or	405 141 3208	TR KTC3198-Y
or	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
Q2156	405 141 3307	TR KTC3198-GR
or	405 141 3208	TR KTC3198-Y
or	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
Q2157	405 026 9004	TR 2SK222-D
Q2201	405 016 0806	TR 2SC2839-E
Q2310	405 141 3307	TR KTC3198-GR
or	405 141 3208	TR KTC3198-Y
or	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
Q2451	405 000 0904	TR DTA114YS
or	405 036 3702	TR 2SA1564
Q2452	405 000 0904	TR DTA114YS
or	405 036 3702	TR 2SA1564
Q2453	405 000 0904	TR DTA114YS
or	405 036 3702	TR 2SA1564
Q4250	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
or	405 012 2002	TR 2SC1815-GR
or	405 141 3307	TR KTC3198-GR
or	405 141 3208	TR KTC3198-Y
Q4270	405 000 3103	TR DTC114ES
or	405 078 2909	TR BA1A4M
or	405 001 0200	TR RN1202
or	405 109 9204	TR KRC102M-A
Q4470	405 005 2002	TR 2SA733-P
or	405 005 1906	TR 2SA733-K
or	405 001 7001	TR 2SA1015-GR
or	405 141 3406	TR KTA1266-GR
or	405 141 3505	TR KTA1266-Y
Q4471	405 005 2002	TR 2SA733-P
or	405 005 1906	TR 2SA733-K
or	405 001 7001	TR 2SA1015-GR
or	405 141 3406	TR KTA1266-GR
or	405 141 3505	TR KTA1266-Y
Q4520	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
or	405 012 2002	TR 2SC1815-GR
or	405 141 3307	TR KTC3198-GR
or	405 141 3208	TR KTC3198-Y
Q4580	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
or	405 012 2002	TR 2SC1815-GR
or	405 141 3307	TR KTC3198-GR
or	405 141 3208	TR KTC3198-Y
Q4620	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
or	405 012 2002	TR 2SC1815-GR
or	405 141 3307	TR KTC3198-GR
or	405 141 3208	TR KTC3198-Y
Q4701	405 033 6805	TR 2SD1468S-S
or	405 021 0600	TR 2SD1012-G-SPA
Q4710	405 000 0508	TR DTA114ES
or	405 078 2305	TR BN1A4M
or	405 001 1108	TR RN2202
or	405 110 5400	TR KRA102M-A
Q4801	405 033 6805	TR 2SD1468S-S
or	405 021 0600	TR 2SD1012-G-SPA
Q4913	405 005 2002	TR 2SA733-P
or	405 005 1906	TR 2SA733-K
or	405 001 7001	TR 2SA1015-GR
or	405 141 3406	TR KTA1266-GR
or	405 141 3505	TR KTA1266-Y

PARTS LIST

REF.NO.	PART NO.	DESCRIPTION
Q4914	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
or	405 012 2002	TR 2SC1815-GR
or	405 141 3307	TR KTC3198-GR
or	405 141 3208	TR KTC3198-Y
Q4930	405 023 5306	TR 2SD400-F-MP
Q4931	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
or	405 012 2002	TR 2SC1815-GR
or	405 141 3307	TR KTC3198-GR
or	405 141 3208	TR KTC3198-Y
Q4932	405 000 3806	TR DTC114YS
or	405 128 9001	TR RN1207
or	405 037 0809	TR 2SC4048
or	405 143 0007	TR KRC107M-A
Q4961	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
or	405 012 2002	TR 2SC1815-GR
or	405 141 3307	TR KTC3198-GR
or	405 141 3208	TR KTC3198-Y
Q4962	405 000 3806	TR DTC114YS
or	405 128 9001	TR RN1207
or	405 037 0809	TR 2SC4048
or	405 143 0007	TR KRC107M-A
R4144	⚠ 402 071 0307	FUSIBLE RES 10 JA 1/4W
R4705	⚠ 402 071 1304	FUSIBLE RES 2.2 JA 1/4W
R4706	⚠ 402 071 1304	FUSIBLE RES 2.2 JA 1/4W
R4791	⚠ 402 078 9303	RESISTOR 100 J- 1W
R4805	⚠ 402 071 1304	FUSIBLE RES 2.2 JA 1/4W
R4806	⚠ 402 071 1304	FUSIBLE RES 2.2 JA 1/4W
R4891	⚠ 402 078 9303	RESISTOR 100 J- 1W
R4910	402 072 3406	RESISTOR 0.1 JA 1/2W
R4911	402 072 3406	RESISTOR 0.1 JA 1/2W
R4912	402 072 3406	RESISTOR 0.1 JA 1/2W
R4919	⚠ 402 078 8504	RESISTOR 1 J- 1W
S4970	645 006 9673	SWITCH,PUSH 1P-1T
T2301	614 029 3906	MX COIL
or	614 255 8119	FILTER,LC
U2101	645 017 7279	TUNER
X2301	645 010 0024	OSC,CERAMIC 456KHZ
or	614 246 0870	RESONATOR
X2451	645 023 4965	OSC,CRYSTAL 7.2MHZ
XF221	614 240 2917	FILTER,CERAMIC,10.7MHZ
or	614 254 3214	FILTER,10.7MHZ
XF222	614 240 2917	FILTER,CERAM,10.7MHZ
or	614 254 3214	FILTER,10.7MHZ
XF231	614 246 0849	FILTER,450KHZ
XF233	645 018 8824	DISCR,CERAMIC,10.7MHZ
or	645 018 8718	DISCR,CERAMIC,10.7MHZ

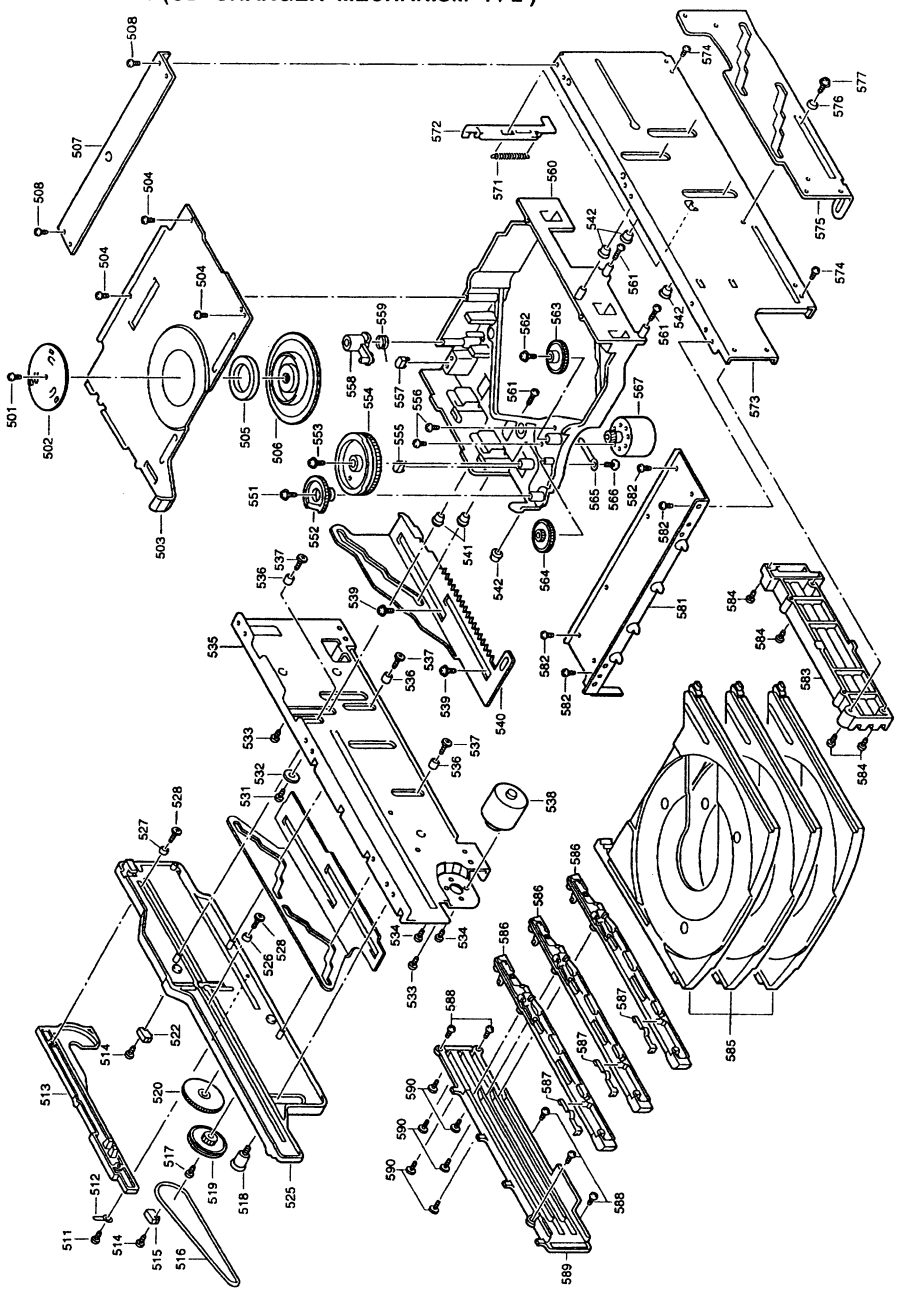
POWER TRANSFORMER, PRIMARY P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
96	614 291 6223	ASSY,PWB,P.T.PRIMARY
CN498	⚠ 614 017 8203	TERMINAL BOARD
CN499	⚠ 614 017 8203	TERMINAL BOARD
FCL41	⚠ 645 006 4760	HOLDER,FUSE
FCL42	⚠ 645 006 4760	HOLDER,FUSE
L4990	⚠ 645 017 8061	INDUCTOR,181M

POWER TRANSFORMER, SECONDARY P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
97	614 291 6216	ASSY,PWB,P.T.SECONDARY
CN490	614 020 1239	SOCKET,4P,AMP/TU
CN495	645 005 8226	PLUG,3P,FRONT
D4901	⚠ 407 196 5800	DIODE 1N5402BD82
D4902	⚠ 407 196 5800	DIODE 1N5402BD82
D4903	⚠ 407 196 5800	DIODE 1N5402BD82
D4904	⚠ 407 196 5800	DIODE 1N5402BD82
D4905	⚠ 407 196 5800	DIODE 1N5402BD82
D4906	⚠ 407 196 5800	DIODE 1N5402BD82
D4907	⚠ 407 196 5800	DIODE 1N5402BD82
D4908	⚠ 407 196 5800	DIODE 1N5402BD82
D4950	407 004 9709	DIODE DSK10C
D4951	407 099 8700	ZENER DIODE MTZJ24B
D4952	407 127 3905	ZENER DIODE MTZJ5.6B
D4953	407 012 4406	DIODE 1SS133
LG401	614 129 9099	LUG
PR495	⚠ 645 014 2468	PROTECTOR,0.63A 125V
R4950	⚠ 402 078 8306	FUSIBLE RES 1 JA 1/2W
R4951	⚠ 402 078 8405	RESISTOR 330 J- 1W

EXPLODED VIEW (CD CHANGER MECHANISM 1 / 2)



PARTS LIST

CD MECHANISM (PM-CD96CHN1/SH)

REF.NO.	PART NO.	DESCRIPTION
501	411 022 7500	SCR S-TPG PAN 2X4, CHUCK PULLEY FIX
502	614 266 8061	HOLDER,CHUCK PLATE PULLEY
503	614 286 3329	HOLDER,CHUCK BRACKET
504	411 022 7807	SCR S-TPG PAN 2X6, CHUCK BRACKET FIX
505	645 009 9809	MAGNET CHUCK,CHUCKING
506	614 272 1674	ASSY,PULLEY,CHUCK
507	614 266 1918	JOINT,B-TOP ENCOURAGE
508	411 028 2905	SCR S-TPG PAN 2X4,JOINT FIX
511	411 021 0809	SCR S-TPG BIN 2X6,LUG FIX
512	614 129 9341	LUG,O/C SW LEAD DRESS
513	614 266 1833	GEAR,OPEN/CLOSE RACK
514	411 021 1202	SCR S-TPG BIN 2X8, OPEN/CLOSE SWITTCH
515	645 010 6491	SWITCH,LEVER,OPEN END SWITCH
516	614 277 6896	BELT,SQUARE,OPEN/CLOSE
517	411 021 2704	SCR S-TPG BIN 2.6X6,PULLEY FIX
518	412 004 5705	SPECIAL SCREW,GEAR BLOCK FIX
519	614 277 7312	PULLEY,OPEN/CLOSE IDLER
520	614 266 1826	GEAR,OPEN/CLODE IDLER
522	645 010 6491	SWITCH,LEVER,CLOSE END SWITCH
525	614 266 1970	MOUNTING,GEAR BLOCK BRACKET
526	614 273 5992	PIPE,GEAR RACK GUIDE(F)
527	614 270 2222	PIPE,GEAR RACK GUIDE(R)
528	412 054 6202	SPECIAL SCREW,GEAR RACK FIX
531	411 022 7807	SCR S-TPG PAN 2X6,TRAY HOLDER
532	411 091 9702	WASHER Z 2X8X0.5
533	411 028 2905	SCR S-TPG PAN 2X4,MOUNTING FIX
534	411 044 7007	SCR PAN+SW 2X3, OPEN/CLOSE MOTOR FIX
535	614 266 1949	MOUNTING,LEFT SIDE BRACKET
536	614 268 0476	PIPE,OPEN/CLOSE BRACKET GUIDE
537	412 054 6202	SPECIAL SCREW,MOUNTING FIX
538	645 009 1186	ASSY,MOTOR,OPEN/COLSE
539	411 098 8807	SCR S-TPG BRZ+FLG 3X6,SLIDE FIX
540	614 266 1994	SLIDE,TRAY HOLDER
541	614 277 9460	PIPE,TRAY HOLDER GUIDE (L)
542	614 268 0469	PIPE,TRAY HOLDER GUIDE (R)
551	411 098 8807	SCR S-TPG BRZ+FLG 3X6,GEAR FIX
552	614 266 1819	GEAR,LOAD/UNLOAD DRIVE
553	411 098 8807	SCR S-TPG BRZ+FLG 3X6,GEAR FIX
554	614 266 1802	GEAR,LOAD/UNLOAD CUM
555	645 012 5904	SWITCH,EP 1P-1T,UNLOAD END SW
556	411 044 7205	SCR PAN+SW 2X4, LOAD/UNLOAD MTR FIX
557	645 012 5904	SWITCH,EP 1P-1T,LOAD END SW
558	614 266 1932	LEVER,LOCK LVR (HOLDER)
559	614 268 0186	SPRING,WIRE,LOAD/UNLOAD LOCK LEVER
560	614 266 1963	MOUNTING,TRAY HOLDER
561	411 022 8408	SCR S-TPG PAN 2X8,TRAY HOLDER
562	411 098 8807	SCR S-TPG BRZ+FLG 3X6,GEAR FIX
563	614 266 8030	GEAR,LOAD/UNLOAD IDLER1
564	614 266 1796	GEAR,LOAD/UNLOAD IDLER2
565	614 129 9136	LUG,LOAD/UNLOAD & OPEN/CLOSE MOTOR LEAD
566	411 098 8807	SCR S-TPG BRZ+FLG 3X6,LUG FIX
567	645 009 1193	ASSY,MOTOR,LOAD/UNLOAD
571	614 268 0162	SPRING,TENS,STOPPER PULL
572	614 279 0595	STOPPER,TRAY STOPPER
573	614 266 1956	MOUNTING,RIGHT SIDE BRAKET
574	411 028 2905	SCR S-TPG PAN 2X4,MOUNTING FIX
575	614 268 2906	ASSY,SLIDE,RIGHT
576	614 270 2239	PIPE,RIGHT SLIDE GUIDE
577	411 098 8807	SCR S-TPG BRZ+FLG 3X6, RIGHT SLIDE FIX
581	614 266 1901	JOINT,F-TOP ENCOURAGE
582	411 028 2905	SCR S-TPG PAN 2X4,JOINT FIX
583	614 286 3343	HOLDER,RIGHT TRAY GUIDE
584	411 028 3100	SCR S-TPG PAN 2X6,HOLDER FIX
585	614 286 3312	ASSY,TRAY
586	614 286 3541	ASSY,HOLDER,TRAY GUIDE
587	614 266 8924	SPRING,PLATE,TRAY HOLD
588	411 028 2905	SCR S-TPG PAN 2X4,HOLDER FIX
589	614 286 3336	HOLDER,LEFT TRAY GUIDE
590	412 055 5303	SPECIAL SCREW-2.0X5.0,HOLDER FIX
601	411 098 8807	SCR S-TPG BRZ+FLG 3X6,GEAR FIX
602	614 266 1758	GEAR,UP/DOWN CUM
603	614 266 1765	GEAR,UP/DOWN CUM
604	411 098 8807	SCR S-TPG BRZ+FLG 3X6,GEAR FIX
605	614 266 1772	GEAR,UP/DOWN DRIVE
606	614 266 1789	GEAR,UP/DOWN DRIVE
607	614 266 1734	GEAR,UP/DOWN IDLER 1
608	411 098 8807	SCR S-TPG BRZ+FLG 3X6,GEAR FIX
609	614 266 1741	GEAR,UP/DOWN IDLER 2
610	614 279 1202	SPECIAL SCREW,PLAY SW SUPPORT
611	411 020 9902	SCR S-TPG BRZ+FLG 3X8,HOLDER
612	614 267 6998	HOLDER,BASE MECHA FIX
613	614 279 1202	SPECIAL SCREW,BASE MECHA FIX
614	614 237 7031	CUSHION,RUBBER,BASE MECHA FL
or	614 277 1952	CUSHION,BASE MECHA FL
or	411 021 1202	SCR S-TPG BIN 2X8,PLAY SWITCH FIX
616	645 010 6491	SWITCH,LEVER,PLAY SWITCH
617	614 247 4907	SPRING,COMP,FLOATING
618	614 291 9835	CHASSIS,BOTTOM
619	614 266 1888	JOINT,BOTTOM BACK
620	614 129 9341	LUG,O/C SW LEAD DRESS
621	411 022 7807	SCR S-TPG PAN 2X6,JOINT FIX
622	614 129 9136	LUG,L/U SW LEAD DRESS
623	411 098 8807	SCR S-TPG BRZ+FLG 3X6,LUG FIX
624	614 287 0440	ASSY,MOTOR,UP/DOWN
625	411 098 8807	SCR S-TPG BRZ+FLG 3X6, BRACKET MOTOR FIX
626	614 129 9136	LUG,V/D MOTOR LEAD DRESS
627	614 266 8054	HOLDER,BRACKET MOTOR
628	411 102 6300	SCR PAN-FLG 2.6X2.8, UP/DOUN MOTOR FIX
629	411 098 8807	SCR S-TPG BRZ+FLG 3X6,PWB FIX
631	614 268 0155	SPRING,TENSION, SINCRO LEVER PULL
632	614 268 2883	ASSY,LEVER,SINCRO LEVER ASSY
633	412 014 6402	SPECIAL WASHER,LEVER ASSY FIX
or	412 014 6402	SPECIAL WASHER,SLIDE FIX
634	614 272 6600	JOINT,BOTTOM FRONT
636	411 098 8807	SCR S-TPG BRZ+FLG 3X6, SENSOR BRACKET
637	614 266 9907	HOLDER,SENSOR BRACKET
638	411 028 2905	SCR S-TPG PAN 2X4,SENSOR PWB
639	411 020 9902	SCR S-TPG BRZ+FLG 3X8,SLIDE FIX
640	614 266 2007	SLIDE,GEAR BLOCK DRIVE
641	412 005 2307	SPECIAL SCREW,SLIDE FIX
	614 269 6026	ASSY,WIRE,SENSOR&U/D MOTOR
	614 269 6033	ASSY,WIRE,LOAD/UNLOAD/ PLAY SWITCH
	614 269 6040	ASSY,WIRE,LOAD/UNLOAD & UP/DOWN MOTOR
	614 269 6057	ASSY,WIRE,OPEN/CLOSE SWITCH

CD SENSOR P.W.BOARD ASSY

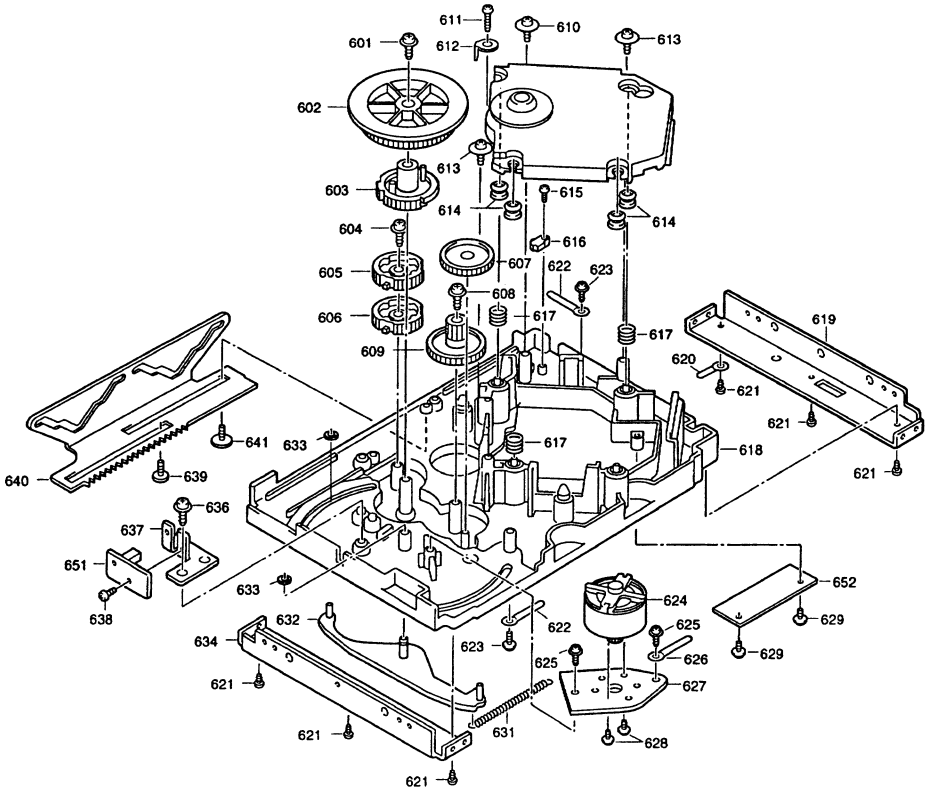
REF.NO.	PART NO.	DESCRIPTION
651	614 270 1928	ASSY,PWB,SENSOR
D191	407 177 6109	PHOTO COUPLE GP1A53E,SENSOR

PARTS LIST

CD CONNECTOR P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
652	614 267 6646	ASSY,PWB,CONNECTOR
CN191	645 009 6440	PLUG,4P,LOAD/UNLOAD SWITCH
or	645 006 0915	PLUG,4P,LOAD/UNLOAD SWITCH
CN192	645 014 9825	PLUG,4P,LOAD/UNLOAD & UP/DOWN MOTOR
or	645 004 2706	PLUG,4P,LOAD/UNLOAD & UP/DOWN MOTOR
CN193	645 009 6464	PLUG,6P,OPEN/CLOSE/PLAY SW
or	645 006 0939	PLUG,6P,OPEN/CLOSE/PLAY SW
CN194	645 009 6457	PLUG,5P,SENSOR & UP/DOWN MOTOR
or	645 006 0922	PLUG,5P,SENSOR & UP/DOWN MOTOR
CN195	645 009 6440	PLUG,4P,CD PWB
or	645 006 0915	PLUG,4P,CD PWB
CN196	645 009 6488	PLUG,8P,CD PWB
or	645 006 0953	PLUG,8P,CD PWB

EXPLODED VIEW (CD CHANGER MECHANISM 2 / 2)



PARTS LIST

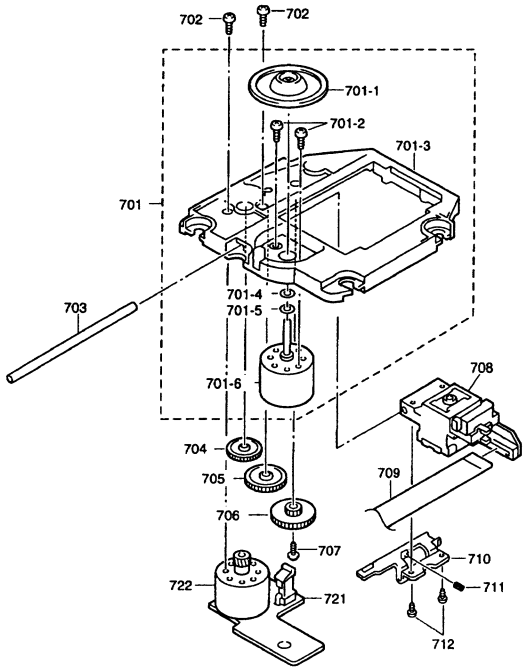
CD BASE MECHANISM (PM-CDBM94D2/SH)

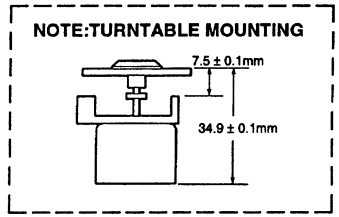
REF.NO.	PART NO.	DESCRIPTION
701	614 270 2031	ASSY,CHASSIS,BASE MECHA
701-1	614 268 3354	ASSY,TURNTABLE,SPINDLE
701-2	411 044 7502	SCR PAN+SW 2X5,SPINDLE MOTOR
701-3	614 262 2582	CHASSIS,BASE MECHA
701-4	412 032 0208	SPECIAL WASHER, ADHESIVE ESCAPE STOP
701-5	412 014 5603	SPECIAL WASHER, TURN TABLE STOPPER
701-6	645 007 7821	MOTOR,CD-SPINDLE DC 0.2W
702	411 044 8004	SCR PAN+SW 2X8,SLED MOTOR FIX
703	614 277 8029	SHAFT,PICK UP RAIL
or	614 237 7024	SHAFT,PICK UP RAIL
704	614 237 7093	GEAR,SLED RETARD GEAR 1
705	614 237 7109	GEAR,SLED RETARD GEAR 2
706	614 237 7116	GEAR,SLED
707	412 047 3904	SPECIAL SCREW,SLED GEAR FIX
708	645 018 8879	PICKUP,LASER SF-P100B
or	645 006 7983	PICKUP,LASER SF-P100
709	645 009 9960	FLEXIBLE FLAT CABLE,PICK-UP
710	614 262 2599	GEAR,RACK,PICK
711	614 238 6934	SPRING,COMP,PICK RACK GEAR
712	411 152 4301	SCR S-TPG PAN PCS 1.7X6, PICK RACK GEAR FIX
722	645 007 7814	ASSY,MOTOR CD-SLED

SPINDLE / SLED MOTOR P.W.BOARD ASSY

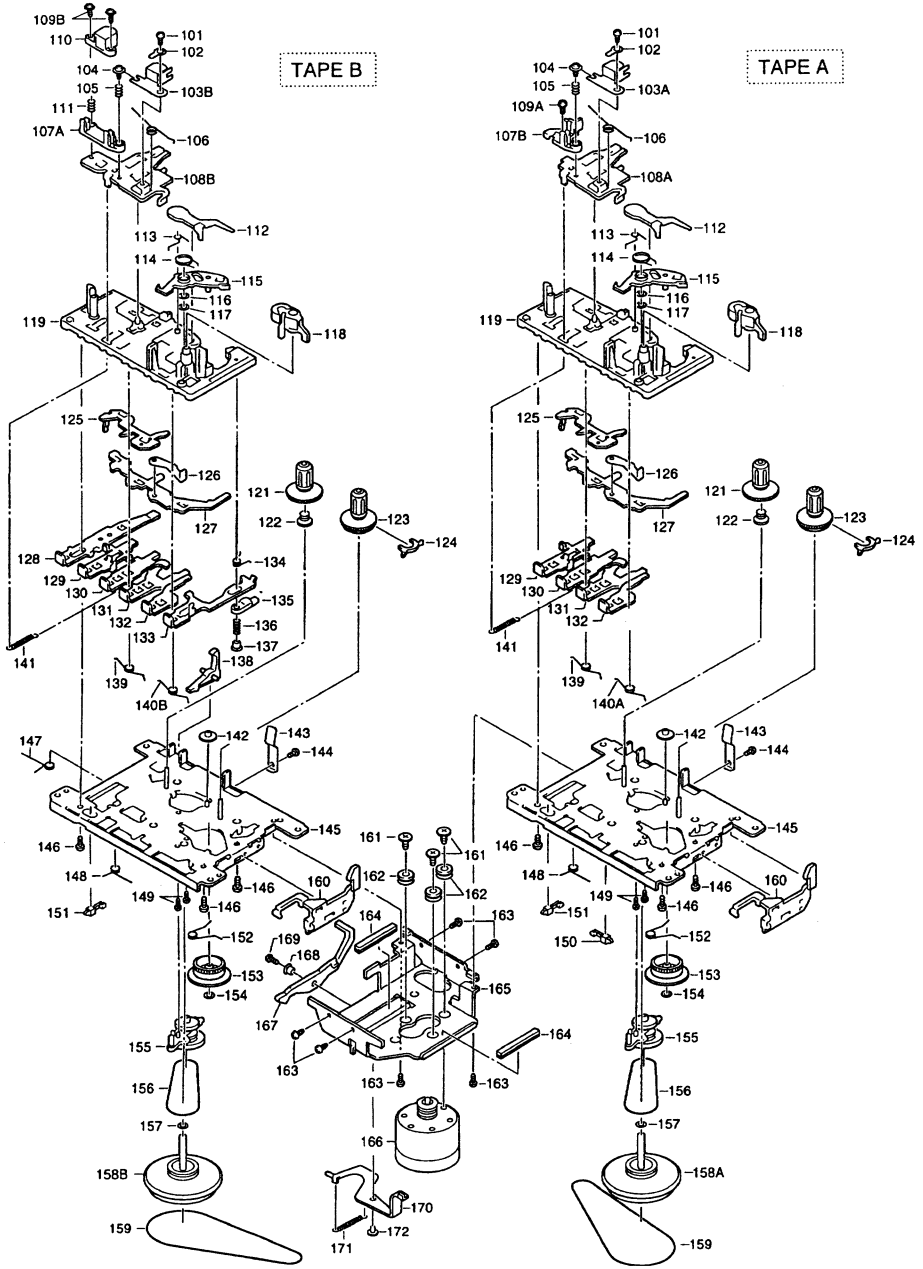
REF.NO.	PART NO.	DESCRIPTION
721	614 254 0664	ASSY,PWB,MOTOR & LIMIT SW
CN001	645 006 0939	PLUG,6P,MOTOR PWB CONNECTOR
S001	645 019 2661	SWITCH,LEAF,LIMIT SWITCH
or	645 012 5836	SWITCH,LEAF,LIMIT SWITCH

EXPLODED VIEW (CD BASE MECHANISM)





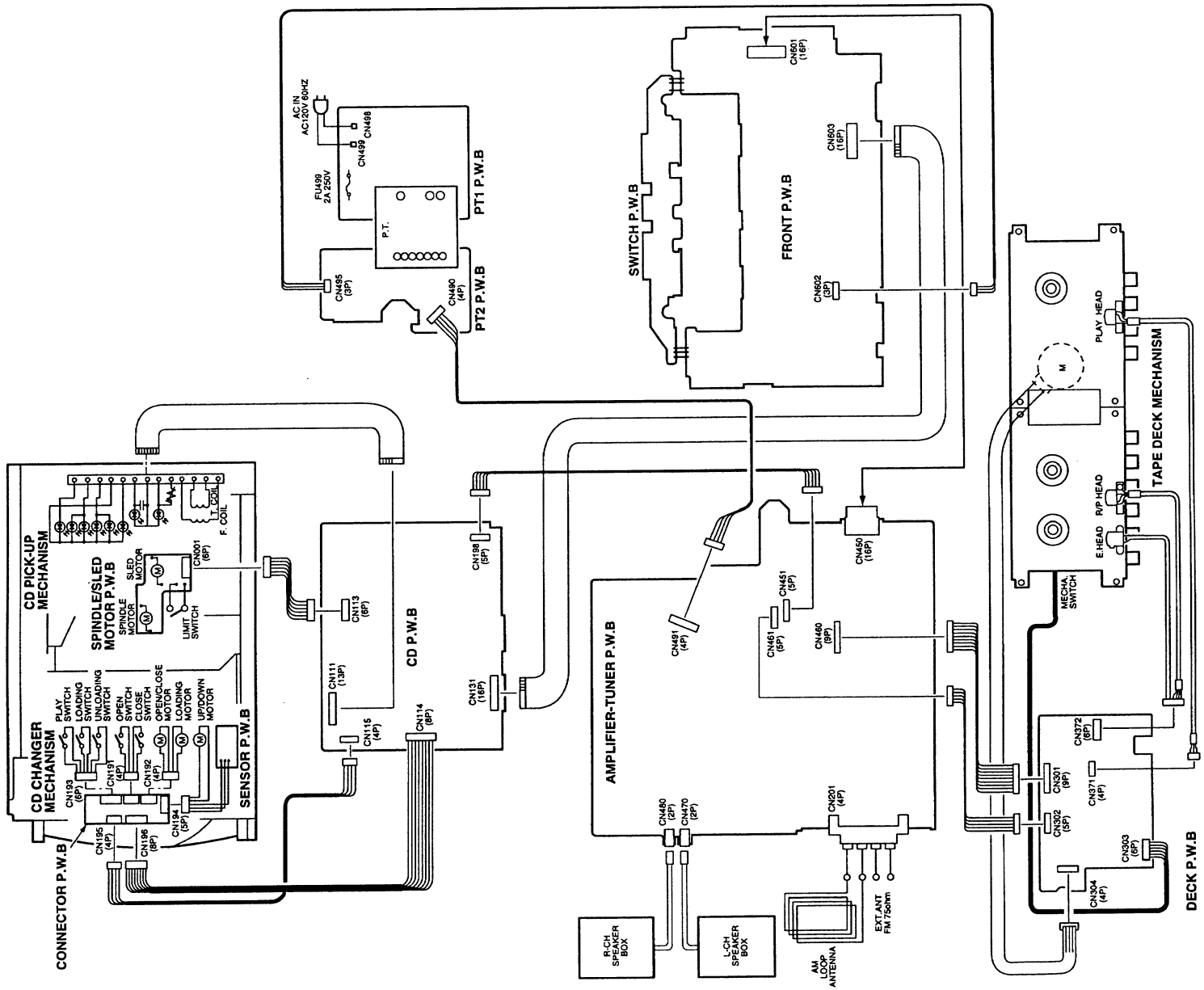
EXPLODED VIEW (TAPE MECHANISM)



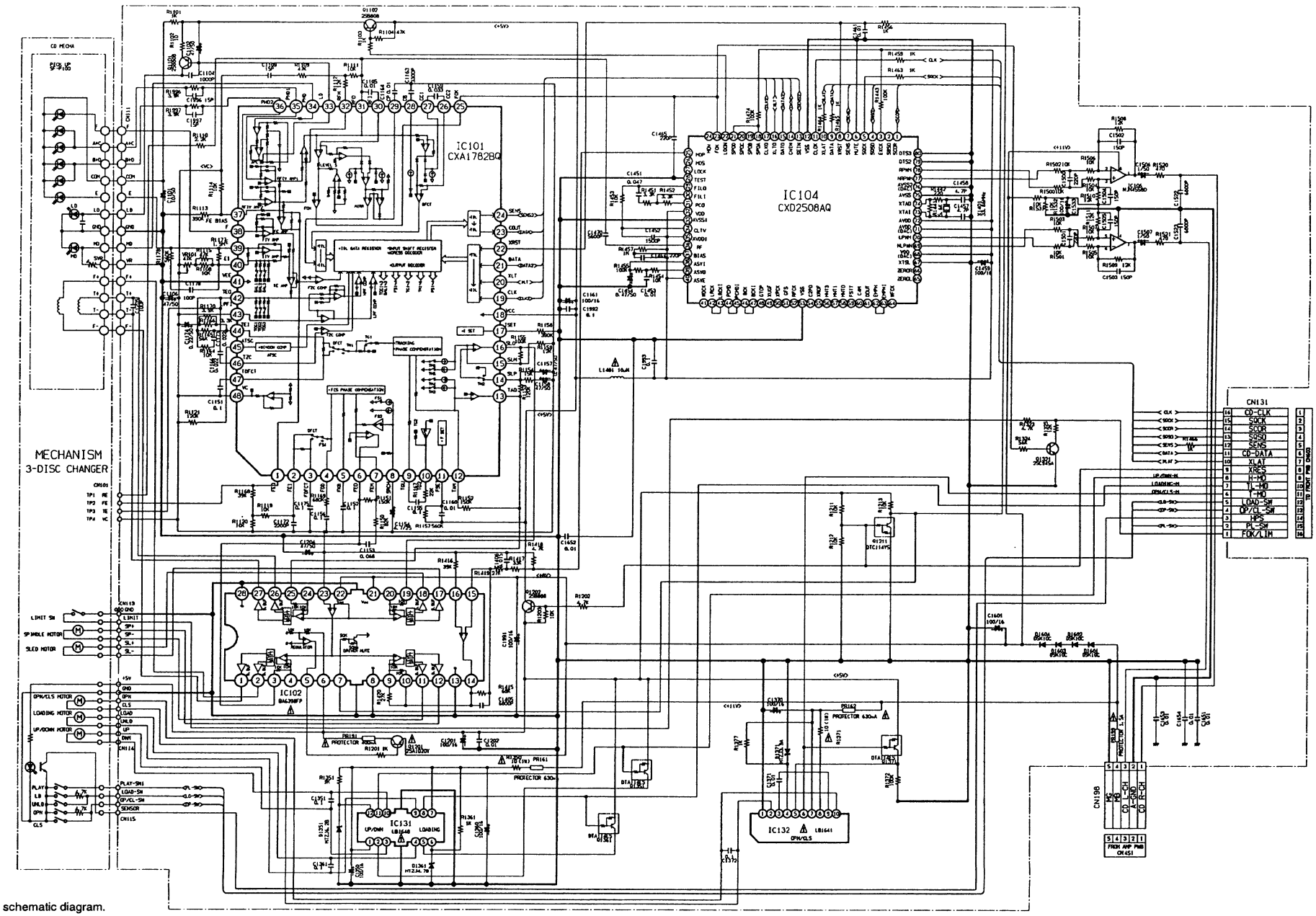
PARTS LIST

TAPE MECHANISM (TM-F210TN-SH)

REF.NO.	PART NO.	DESCRIPTION
101	645 018 6714	SCREW 2.0X3
102	645 018 6707	B3 LUG 2.0
103A	614 268 5396	HEAD,REC/PLAY
103B	614 268 5396	HEAD,PLAY
104	645 009 2282	AZIMUTH SCREW M2X7
105	645 009 1551	AZIMUTH SPRING
106	645 009 1360	PANEL P SPRING
107A	645 009 1353	HEAD BASE
107B	645 010 9409	HEAD BASE
108A	645 009 1377	HEAD PANEL
108B	645 010 9416	HEAD PANEL
109A	645 009 2299	SCREW M2X6
109B	614 294 7418	(+)(-)CAP SCREW M2X8
110	614 021 8251	MAGNETIC HEAD,ERASE
111	645 009 6891	E HEAD SPRING
112	645 009 1506	SENSING LEVER
113	645 009 1452	M CONTROL SPRING
114	645 009 1513	GEAR PLATE SPRING
115	645 025 4567	ASSY,GEAR PLATE
116	645 013 5385	P WASHER CUT
117	614 294 7425	P WASHER CUT 2.1X4.0X0.25
118	645 009 1612	PINCH ROLLER ARM ASSY
119	645 009 1308	BASE ASSY
121	645 023 8116	S REEL HUB
122	645 025 4598	BACK TENSION SPRING
123	645 025 4604	ASSY,TAKE UP REEL
124	645 009 1629	SENSOR
125	645 009 1285	SWITCH ACTUATOR
126	645 009 1339	E KICK LEVER
127	645 009 3760	PUSH BUTTON ACTUATOR
128	645 011 0757	REC BUTTON LEVER
129	645 011 0764	PLAY BUTTON LEVER
130	645 011 0771	REW BUTTON LEVER
131	645 011 0788	FF BUTTON LEVER
132	645 011 0795	STOP BUTTON LEVER
133	645 023 8147	PAUSE BUTTON LEVER
134	645 009 1407	P CONTROL SPRING
135	645 011 1211	PAUSE LEVER(E)
136	645 009 1391	PAUSE LEVER SPRING
137	645 009 1384	PAUSE STOPPER
138	645 009 1674	RECORD SAFETY LEVER
139	645 009 1414	BUTTON LEVER SPRING(A)
140A	645 011 1839	BUTTON LEVER SPRING(C)
140B	645 009 1421	BUTTON LEVER SPRING(B)
141	645 009 3210	PLAY BUTTON LEVER SPRING
142	645 009 1568	FF GEAR
143	645 022 1729	PACK SPRING PLATE
144	645 012 2774	C TAPP M2X3 SPECIAL
145	645 009 1346	CHASSIS ASSY
146	645 009 2244	P TAP BIND SCREW M2X5
147	645 009 1476	REC BUTTON LEVER SPRING
148	645 009 1445	PS LEVER SPRING
149	645 009 2268	TAP CAMERA SCREW M2X4.5
150	645 010 9560	LEAF SW MSW-17820
151	645 010 9553	LEAF SW MSW-1541T
152	645 009 1438	E ACTUATOR SPRING
153	645 009 1490	CAM GEAR
154	614 294 7432	P WASHER CUT 1.2X3.8X0.3
155	645 011 1136	RF CLUTCH ASSY
156	645 009 1766	RF BELT
157	645 009 2626	P WASHER 2.0X3.5X0.3
158A	645 025 4574	ASSY,FLYWHEEL
158B	645 009 1773	FLYWHEEL ASSY
159	645 011 1150	MAIN BELT
160	645 010 9423	E SLIDE LEVER
161	645 011 1044	MOTOR COLLER SCREW
162	645 011 1037	MOTOR RUBBER
163	645 009 2312	C TAP SCREW M2X4
164	645 011 1198	ANTI VIBRATION FELT MAT
165	645 011 1181	MOTOR BRACKET
166	614 276 2417	ASSY,MOTOR,SERVICE
167	645 011 1174	P KICK LEVER(B)
168	645 009 2435	COLLAR(B)
169	645 009 2329	C TAP SCREW M2X6
170	645 011 1068	P KICK LEVER(A)
171	645 011 1051	P KICK LEVER SPRING
172	645 009 2428	PK COLLAR SCREW(A)


AC IN
AC120V 60HZ
CN498
CN499
FU101
2A 250V
P.T.
PT1 P.W.B
CN495
(3P)
CN490
(4P)
PT2 P.W.B
SWITCH P.W.B
FRONT P.W.B
CN601
(16P)
CN603
(16P)
CN602
(3P)
PLAY HEAD
TAPE DECK MECHANISM
R/P HEAD
E-HEAD
MECHA SWITCH
CD PICK-UP MECHANISM
F. COIL
T. COIL
SPINDLE/SLED MOTOR P.W.B
SLED MOTOR
SPINDLE MOTOR
LIMIT SWITCH
CN001
(6P)
CD CHANGER MECHANISM
PLAY SWITCH
LOADING SWITCH
UNLOADING SWITCH
OPEN SWITCH
CLOSE SWITCH
OPEN/CLOSE MOTOR
LOADING MOTOR
UP/DOWN MOTOR
SENSOR P.W.B
CN193
(6P)
CN191
(4P)
CN192
(4P)
CN194
(5P)
CN195
(4P)
CN196
(6P)
CONNECTOR P.W.B
CN113
(6P)
CN111
(13P)
CN115
(4P)
CN114
(6P)
CD P.W.B
CN198
(5P)
CN131
(16P)
AMPLIFIER-TUNER P.W.B
CN491
(4P)
CN450
(16P)
CN451
(5P)
CN461
(5P)
CN460
(9P)
CN480
(2P)
CN470
(2P)
CN201
(4P)
R-CH SPEAKER BOX
L-CH SPEAKER BOX
AM LOOP ANTENNA
EXT.ANT FM 75ohm
CN372
(6P)
CN301
(9P)
CN371
(4P)
CN302
(5P)
CN303
(6P)
CN304
(4P)
DECK P.W.B

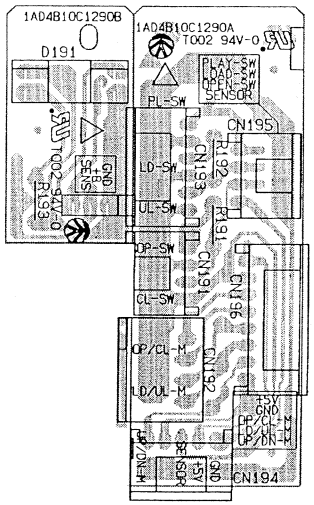
SCHEMATIC DIAGRAM (CD < OLD TYPE >)



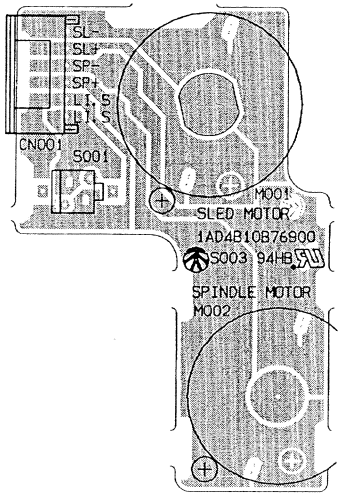
This is a basic schematic diagram.

SENSOR P.W.B

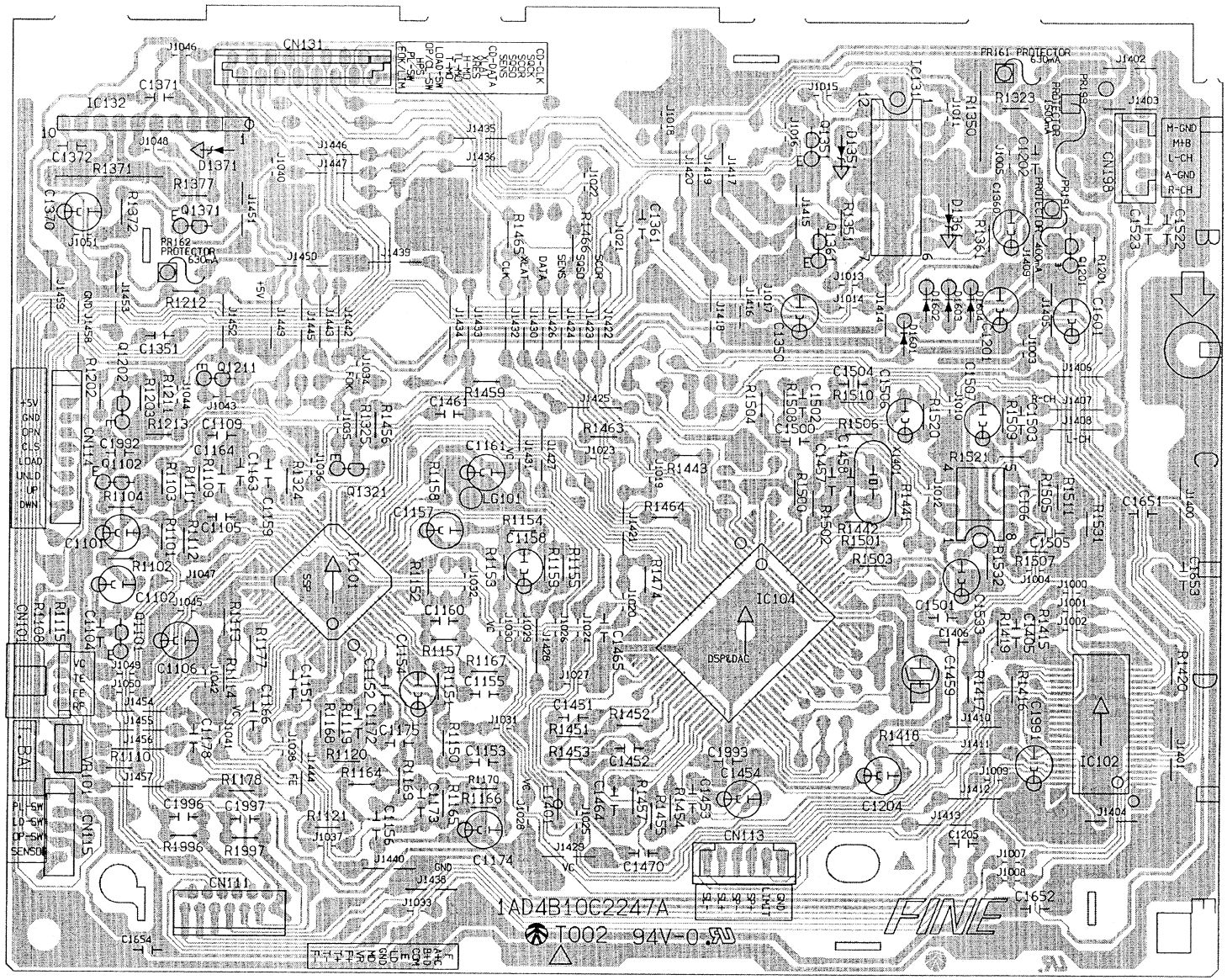
CONNECTOR P.W.B



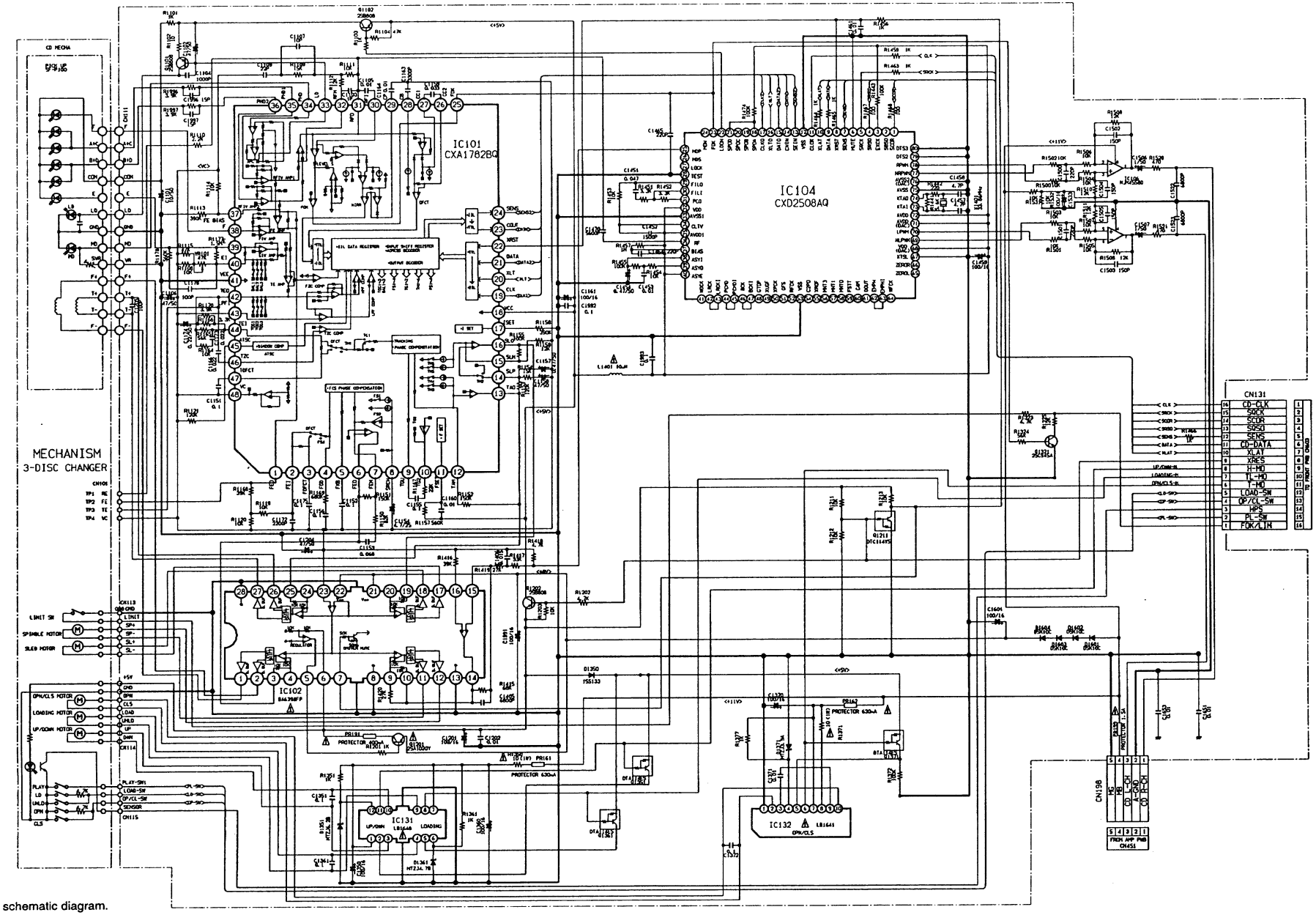
SPINDLE / SLED MOTOR P.W.B



CD P.W.B (OLD TYPE)

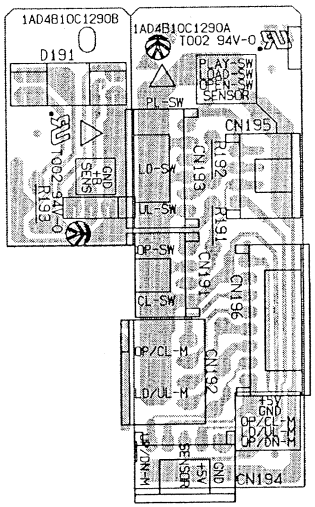


SCHEMATIC DIAGRAM (CD < NEW TYPE >)



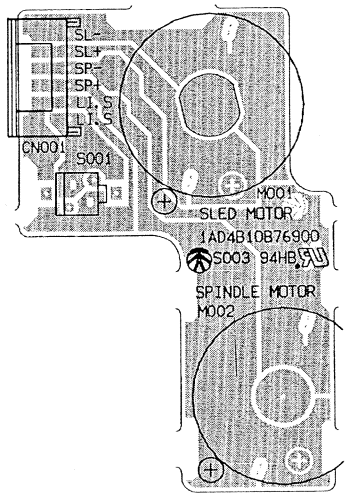
This is a basic schematic diagram.

SENSOR P.W.B

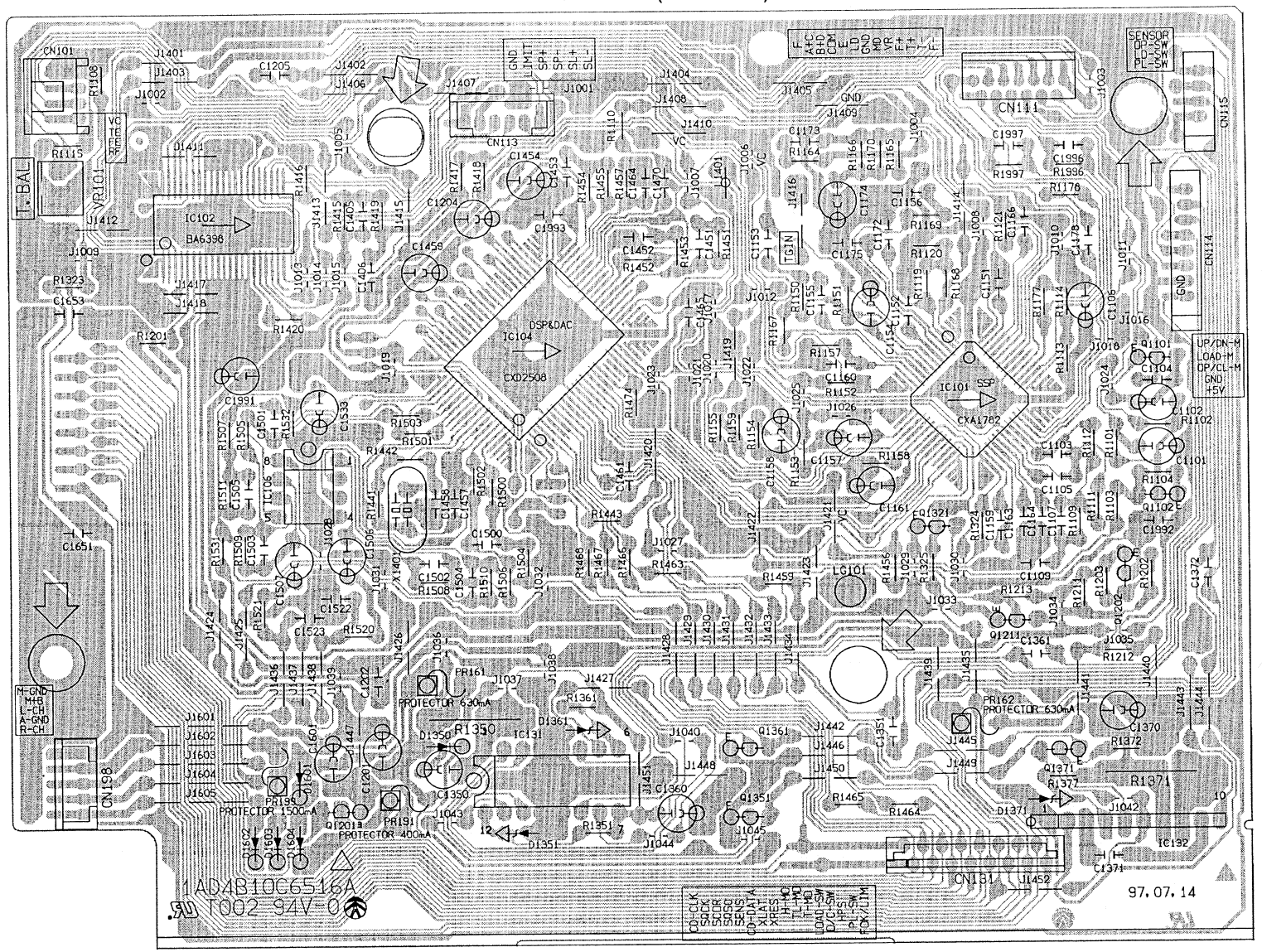


CONNECTOR P.W.B

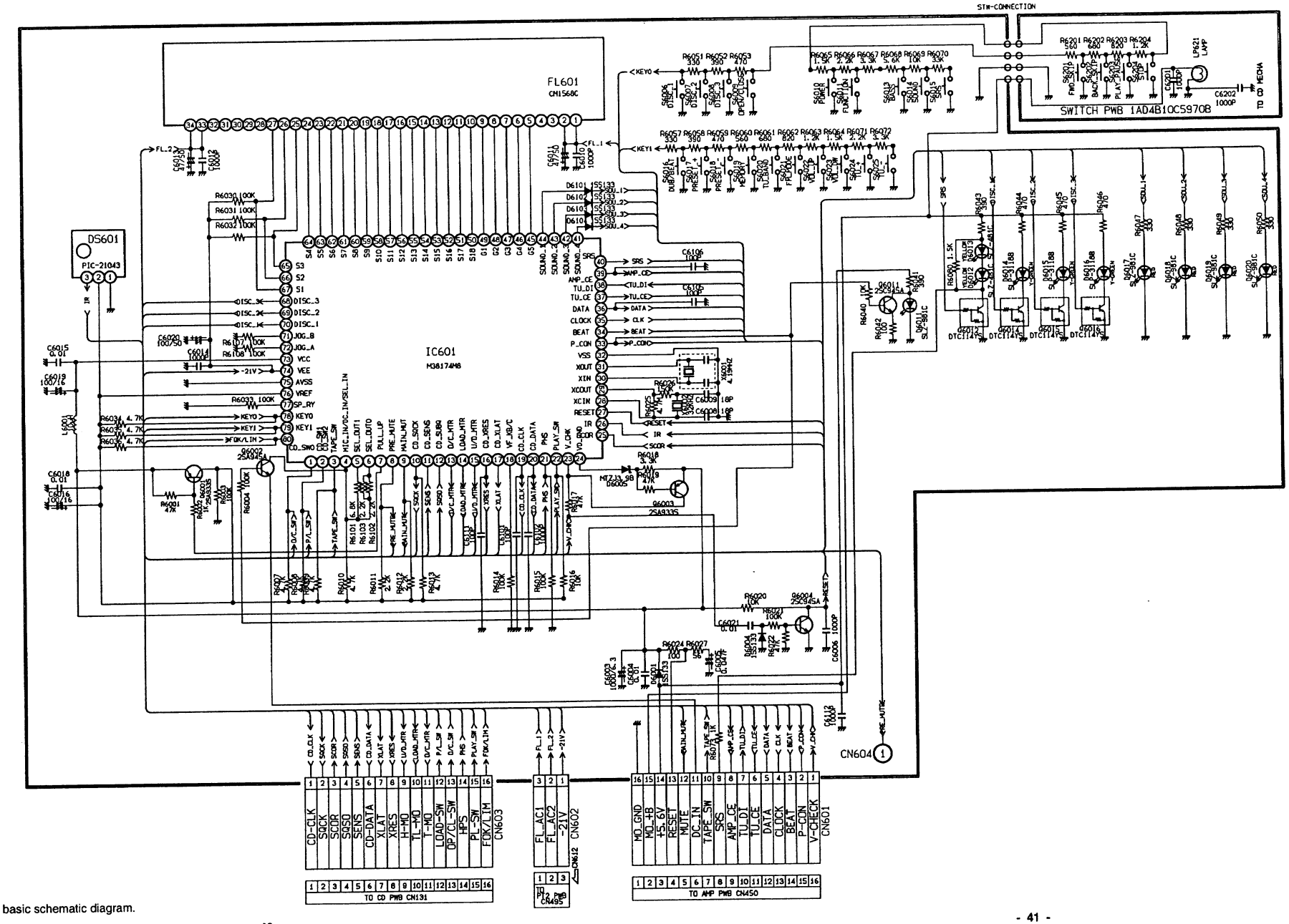
SPINDLE / SLED MOTOR P.W.B



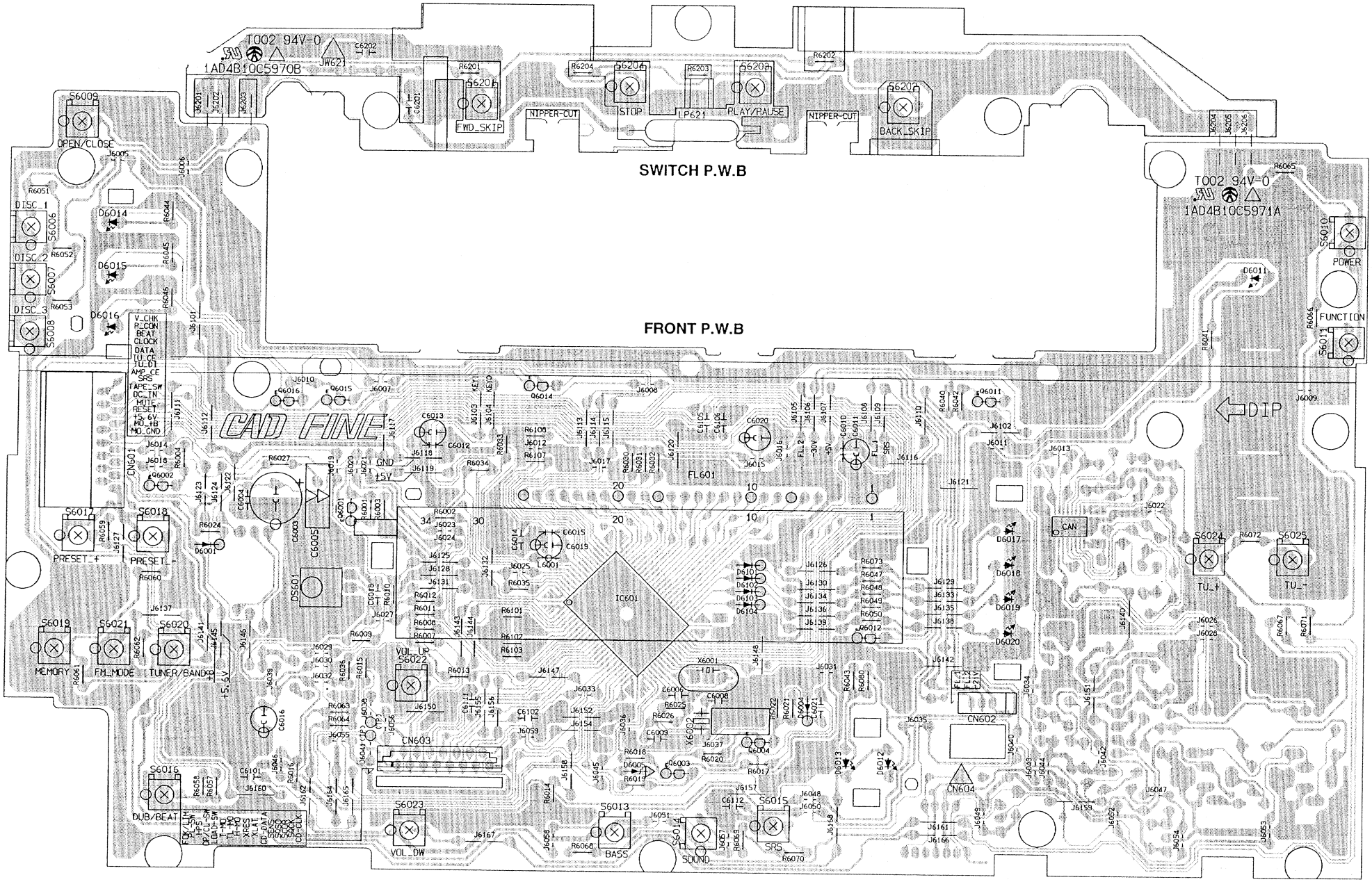
CD P.W.B (NEW TYPE)



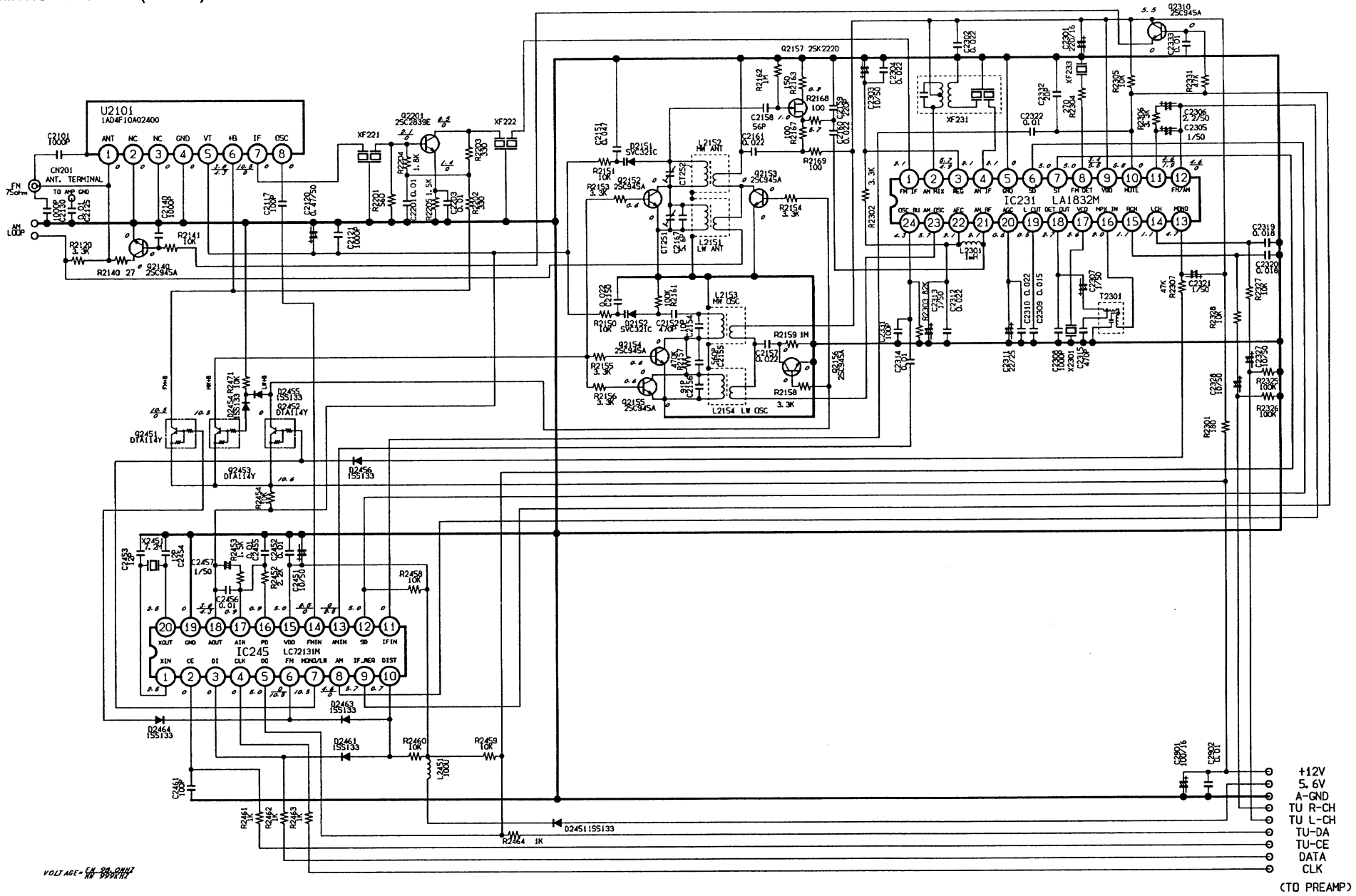
SCHEMATIC DIAGRAM (FRONT)



This is a basic schematic diagram.

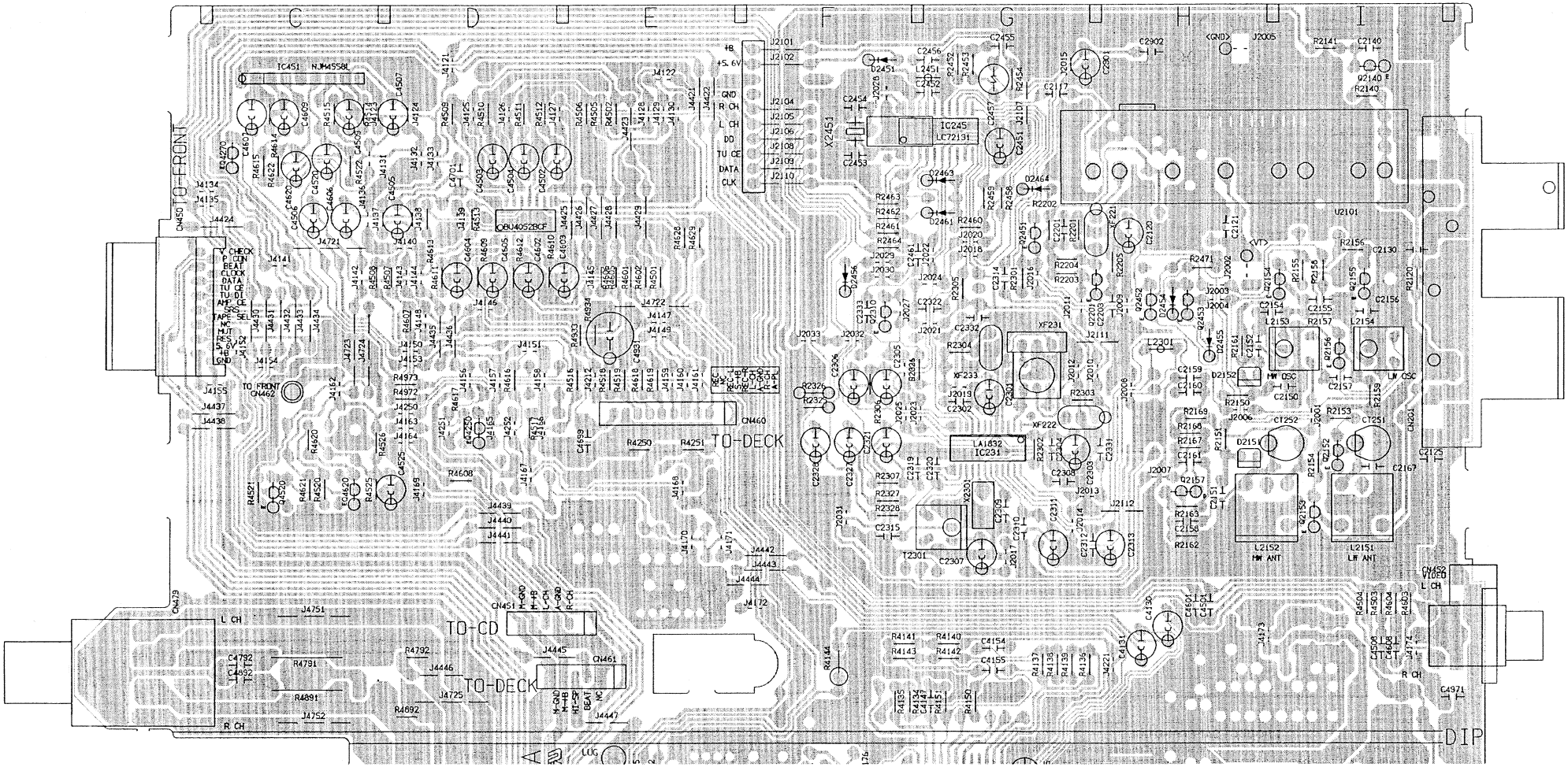

SWITCH P.W.B
FRONT P.W.B
T002 94V-0
1AD4B10C5970B
T002 94V-0
1AD4B10C5971A
OPEN/CLOSE
DISC_1
DISC_2
DISC_3
FWD_SKIP
STOP
PLAY/PAUSE
BACK_SKIP
POWER
FUNCTION
DIP
PRESET_+
PRESET_-
MEMORY
FM_MODE
TUNER/BAND
DUB/BEAT
VOL_UP
VOL_DW
BASS
SOUND
SRS
TU_+
TU_-
IC601
FL601
CN601
CN602
CN603
CN604
CAN
CAD FINE

SCHEMATIC DIAGRAM (TUNER)

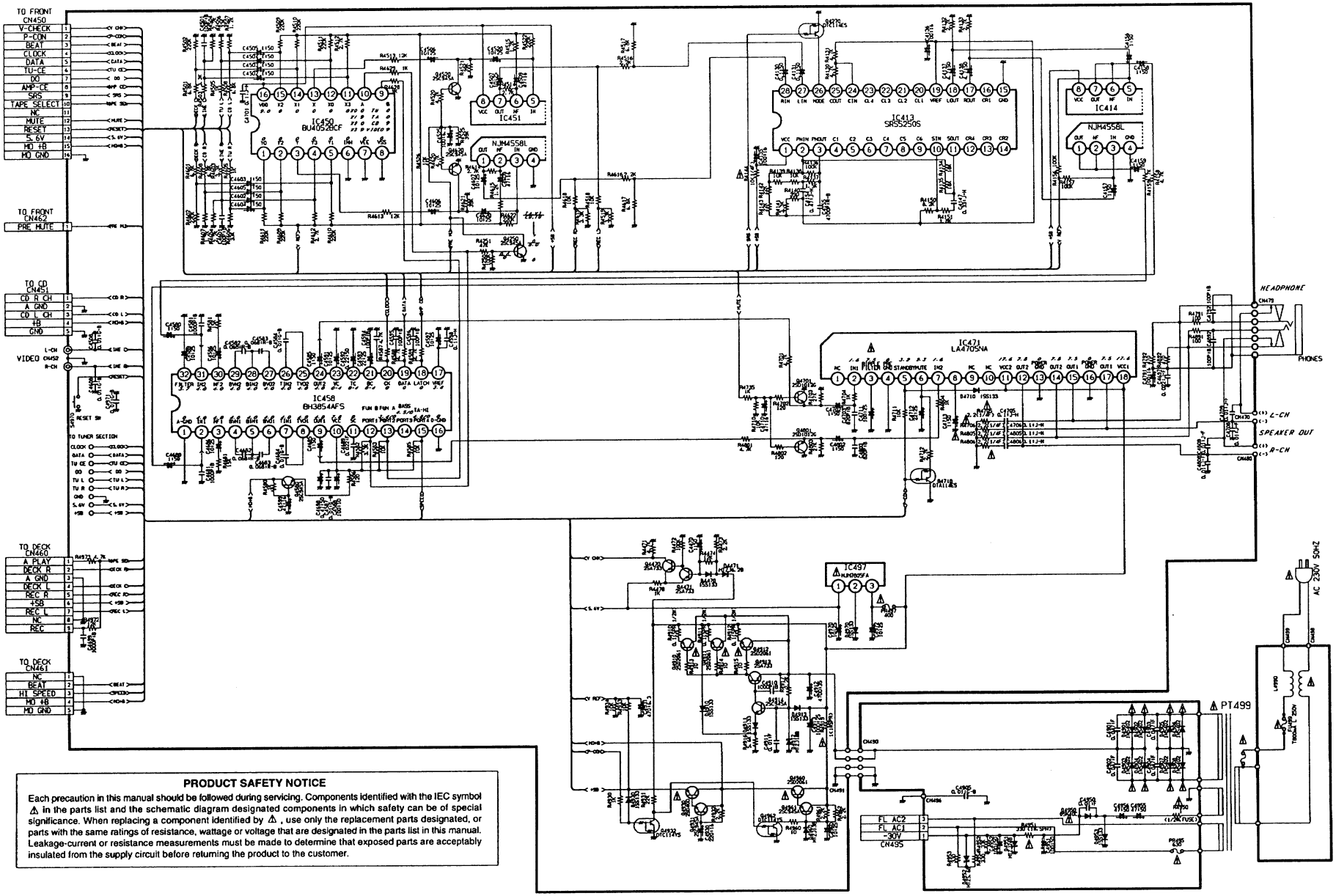


This is a basic schematic diagram.

AMPLIFIER-TUNER P.W.B (1/2)



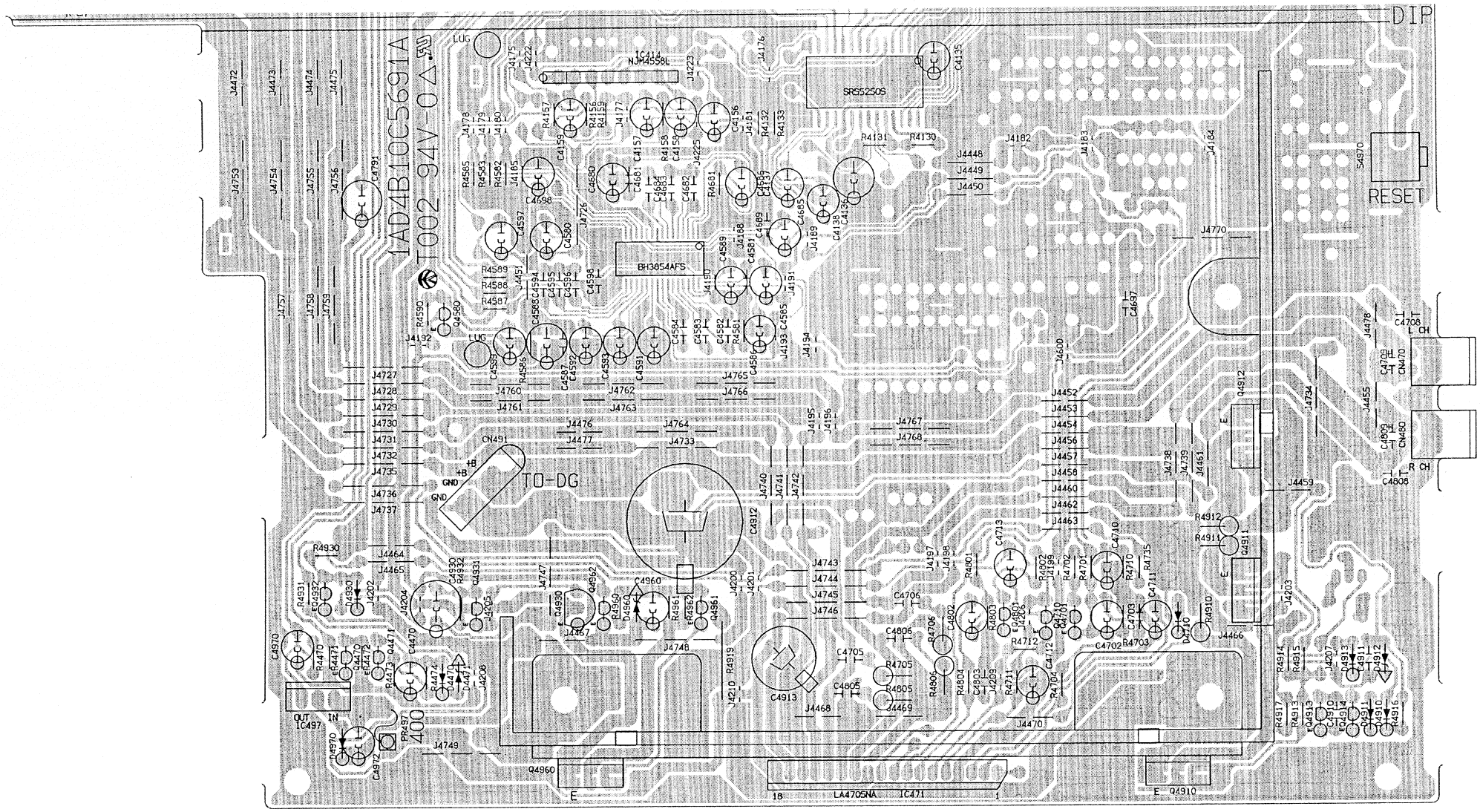
SCHEMATIC DIAGRAM (AMPLIFIER)



PRODUCT SAFETY NOTICE

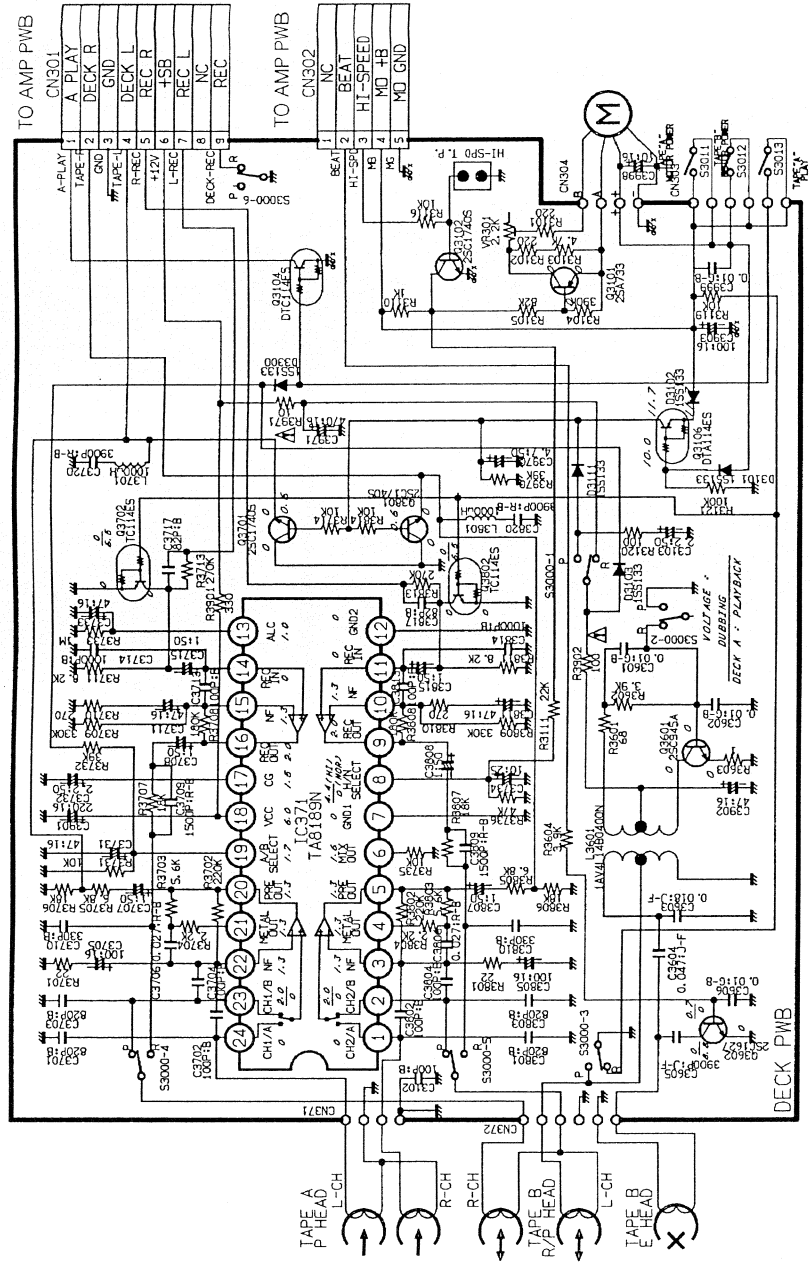
Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list and the schematic diagram designated components in which safety can be of special significance. When replacing a component identified by ⚠ , use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

This is a basic schematic diagram.



AMPLIFIER-TUNER P.W.B (2/2)

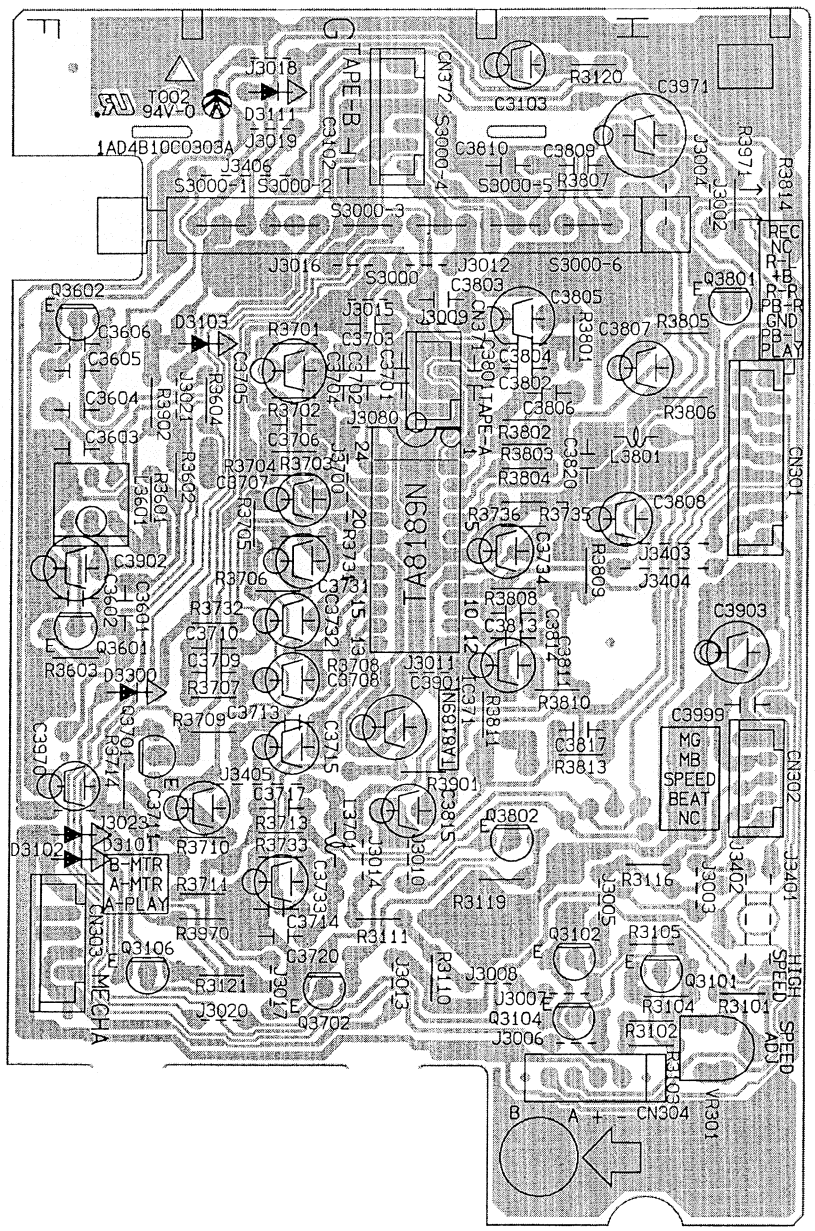
SCHEMATIC DIAGRAM (DECK)



This is a basic schematic diagram.

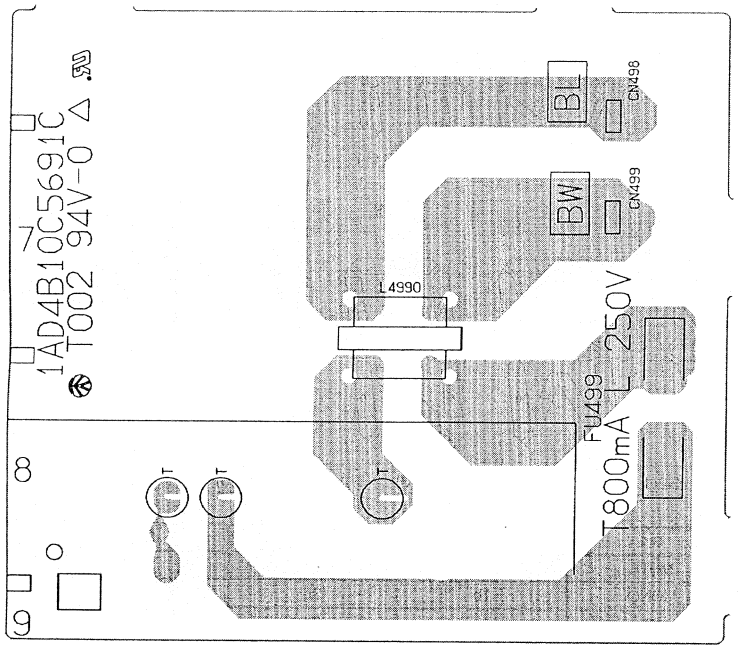
WIRING DIAGRAM (DECK)

DECK P.W.B

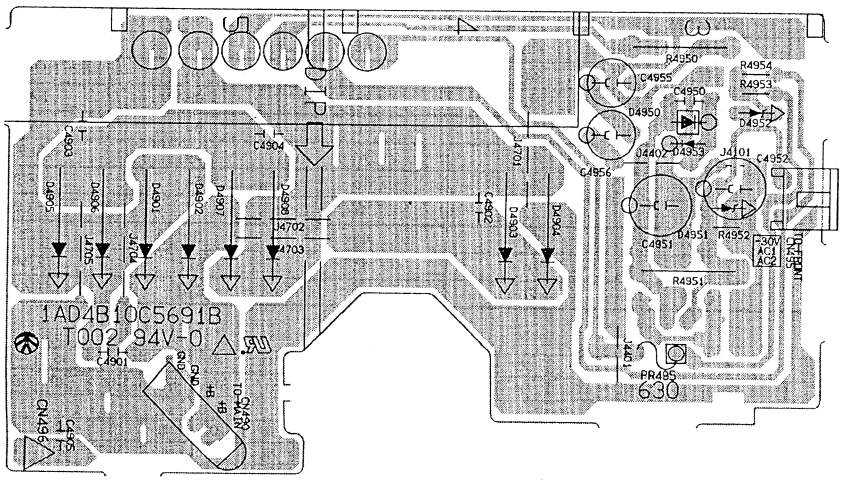


WIRING DIAGRAM (OTHER)

POWER TRANSFORMER, PRIMARY P.W.B



POWER TRANSFORMER, SECONDARY P.W.B



IC & TRANSISTOR VOLTAGES

TRNSISTORS

(CD SECTION)

PIN	Q1101			Q1102			Q1201			Q1202			Q1211			Q1321		
NAME	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
PLAY	4.5	1.8	3.7	5.0	5.0	4.2	9.7	5.0	9.1	5.0	1.2	4.7	0.0	0.0	4.6	0.0	0.0	0.6
STOP	1.4	1.3	0.0	5.0	1.3	5.0	9.1	5.0	7.8	5.0	4.9	0.7	0.0	4.4	0.0	0.0	0.0	0.6

PIN	Q1371		
NAME	B	C	E
OPEN	5.0	4.9	1.8
STOP	5.0	4.9	1.8

(FRONT SECTION)

PIN	Q6001			Q6002			Q6003			Q6004			Q6011			Q6012		
NAME	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
ON	4.0	4.8	4.8	0.0	4.9	4.6	4.8	4.5	4.8	0.0	4.8	0.0	1.8	1.2	1.2	4.7	0.0	0.0
OFF	4.0	4.8	4.8	4.6	4.8	4.8	4.9	4.6	4.9	0.0	4.8	0.0	0.0	1.8	0.0	0.0	11.5	0.0

PIN	Q6014			Q6015			Q6016		
NAME	B	C	E	B	C	E	B	C	E
ON	4.7	0.0	0.0	4.7	0.0	0.0	4.7	0.0	0.0
OFF	0.0	10.3	0.0	0.0	10.3	0.0	0.0	10.3	0.0

IC101 CXA1782BQ (V)

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
PLAY	2.6	2.5	2.5	2.5	2.5	2.7	2.5	2.9	2.5	2.5	0.8	2.5	2.5	2.5	2.5
STOP	2.6	2.6	2.5	2.5	2.5	2.5	2.5	2.9	2.5	2.5	0.8	2.5	2.5	2.5	2.5
Pin No.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
PLAY	2.5	1.2	5.0	5.0	5.0	4.9	4.8	0.0	5.0	5.0	0.6	0.7	1.5	2.4	2.5
STOP	2.5	1.2	5.0	5.0	5.0	4.9	4.8	0.0	5.0	0.0	2.2	4.3	3.1	1.2	2.5
Pin No.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
PLAY	3.5	2.5	3.8	0.2	2.5	2.5	2.4	2.3	2.5	2.2	0.0	2.5	2.5	2.5	2.5
STOP	1.0	3.5	0.8	0.0	2.2	2.2	2.5	2.5	2.1	3.4	0.0	2.5	2.5	2.5	2.5
Pin No.	46	47	48												
PLAY	2.5	2.5	2.5												
STOP	2.5	2.5	2.5												

IC102 BA6398FP (V)

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
PLAY	4.2	4.2	2.5	2.5	8.2	5.0	4.8	0.0	2.5	2.4	4.6	4.1	0.0	2.4	2.5
STOP	4.2	0.0	2.5	2.5	9.3	5.0	4.8	0.0	2.5	2.5	4.6	4.6	0.0	9.0	2.5
Pin Ni.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
PLAY	2.5	4.2	4.4	2.5	2.5	9.2	9.2	2.5	2.5	2.5	4.2	4.2	0.0		
STOP	2.5	4.6	4.6	2.5	2.5	9.2	9.2	2.5	2.5	0.0	4.6	4.6	0.0		

IC & TRANSISTOR VOLTAGES

IC104 CXD2508AQ

(V)

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
PLAY	0.0	0.0	5.0	0.0	4.7	0.0	5.0	4.8	4.7	4.8	4.8	0.0	5.0	0.0	3.3
STOP	0.0	3.4	5.0	0.0	4.9	0.0	0.0	4.8	4.8	4.8	4.8	0.0	5.0	0.0	5.0
Pin Ni.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
PLAY	5.0	5.0	5.0	5.0	0.0	5.0	0.5	5.0	5.0	2.6	0.0	5.0	0.0	2.5	2.5
STOP	5.0	5.0	5.0	0.0	0.0	5.0	5.0	0.0	0.0	2.5	0.0	0.0	0.0	2.5	2.5
Pin Ni.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
PLAY	2.5	5.0	0.0	2.5	5.0	2.7	0.8	2.5	2.5	5.0	2.5	2.5	2.5	2.5	2.5
STOP	2.5	5.0	0.0	2.5	5.0	2.7	0.8	2.5	2.5	5.0	2.5	2.5	2.5	2.7	2.7
Pin No.	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
PLAY	2.0	2.4	0.0	5.0	1.7	5.0	2.5	1.7	0.0	5.0	4.5	0.0	0.0	2.6	1.7
STOP	2.0	2.4	5.0	5.0	1.7	0.0	2.5	0.0	5.0	0.0	4.3	3.6	0.0	2.6	2.1
Pin No.	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
PLAY	1.7	0.0	0.0	2.5	0.0	0.0	0.0	0.0	2.5	2.5	5.0	2.5	2.5	2.5	0.0
STOP	2.1	2.1	2.1	2.5	4.8	4.8	0.0	5.0	2.5	2.5	5.0	5.0	2.5	2.5	0.0
Pin No.	76	77	78	79	80										
PLAY	0.0	2.5	2.5	0.0	0.0										
STOP	0.0	2.5	2.5	0.0	0.0										

IC106 NJM4558D

(V)

Pin No.	1	2	3	4	5	6	7	8
PLAY	3.8	3.2	3.2	0.0	3.2	3.2	3.8	8.8
STOP	4.0	2.9	2.9	0.0	2.9	2.9	4.0	9.0

IC131 LB1648

(V)

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12
STOP	8.8	4.3	0.4	0.0	4.3	3.8	8.8	1.9	0.0	0.4	1.9	6.1
UP	8.8	4.3	0.0	0.0	4.3	3.8	8.8	4.0	0.0	6.0	0.0	6.1
DOWN	8.8	0.0	6.0	0.0	4.3	3.8	8.8	0.0	0.0	0.0	4.0	6.1
LOAD	8.8	4.3	0.4	0.0	4.3	3.8	8.8	1.9	4.0	0.4	1.9	6.1
UNLOAD	8.8	4.3	0.4	4.0	0.0	3.8	8.8	1.9	0.0	0.4	1.9	6.1

IC132 LB1641

(V)

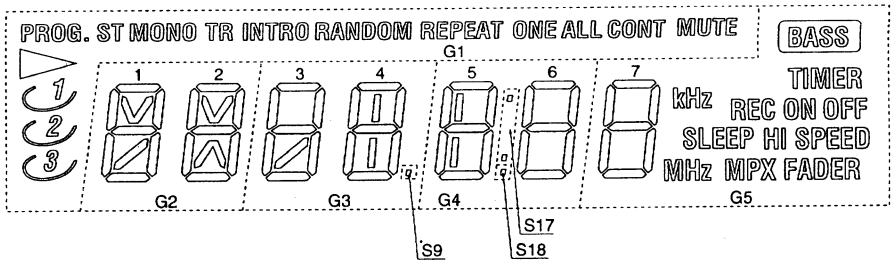
Pin No.	1	2	3	4	5	6	7	8	9	10
STOP	0	0.5	0.7	3.8	4.2	1.5	8.8	8.9	0.7	0.5
OPEN	0	0.2	0.7	3.8	0	4	8.8	8.9	5.2	4
CLOSE	0	4	4.9	3.8	4.2	0	8.8	8.9	0.7	0.7

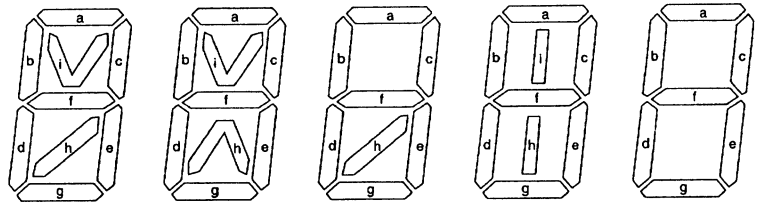
IC601 M38174M8-290

(V)

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CD PLAY	0.0	2.3	4.8	4.8	4.8	4.8	0.0	0.0	0.0	4.7	0.0	0.0	0.0	2.5	2.5
CD STOP	0.0	0.0	4.8	4.8	4.8	4.8	0.0	4.8	2.0	0.0	1.0	0.0	1.6	2.5	2.5
Pin No.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
CD PLAY	0.0	4.8	0.0	4.8	0.0	4.4	0.0	4.5	4.7	0.0	4.7	4.8	1.9	2.3	2.1
CD STOP	4.7	0.0	0.0	0.0	0.0	0.0	4.8	0.0	4.8	1.0	4.8	4.8	2.1	2.3	2.1
Pin No.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
CD PLAY	1.8	0.0	4.7	0.0	0.0	0.0	0.0	5.0	0.0	0.0	-23.0	4.5	-23	-23	-
CD STOP	1.8	0.0	4.7	0.0	0.0	0.0	0.0	5.0	0.0	0.0	-23.0	4.5	-23	-23	-
Pin No.	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CD STOP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pin No.	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
CD PLAY	-	-	-	-	-	-	-	0.0	0.0	0.0	0.0	0.0	4.7	-23.0	0.0
CD STOP	-	-	-	-	-	-	-	4.7	4.7	4.7	0.0	0.0	4.7	-23.0	0.0
Pin No.	76	77	78	79	80										
CD PLAY	4.8	4.7	4.7	4.7	3.4										
CD STOP	4.8	4.7	4.7	4.7	3.4										

FL DISPLAY DESCRIPTION





	G1	G2	G3	G4	G5
S1	MUTE	1a	3a	5a	7a
S2	MONO	1b	3b	5b	7b
S3	ST	1c	3c	5c	7c
S4	CONT	1d	3d	5d	7d
S5	ALL	1e	3e	5e	7e
S6	ONE	1f	3f	5f	7f
S7	REPEAT	1g	3g	5g	7g
S8	RANDOM	1h	3h	5h	kHz
S9	INTRO	1i	S9	5i	MHz
S10	TR	2a	4a	6a	HI SPEED
S11	PROG	2b	4b	6b	FADER
S12	▷	2c	4c	6c	MPX
S13	1	2d	4d	6d	SLEEP
S14	(1	2e	4e	6e	REC
S15	2	2f	4f	6f	ON
S16	(2	2g	4g	6g	OFF
S17	3	2h	4h	S17	TIMER
S18	(3	2i	4i	S18	BASS

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Assignment	F1	F1	NP	NL	G5	G4	G3	G2	G1	S18	S17	S16	S15	S14	S13	S12	S11

Pin No.	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Assignment	S10	S9	S8	S7	S6	S5	S4	S3	S2	S1	NL	NL	NL	NL	NP	F2	F2

F1, F2 : Filament G1-G5 : Grid S1-S18 : Anode NP : No Pin NL : No Lead

IC BLOCK DIAGRAM

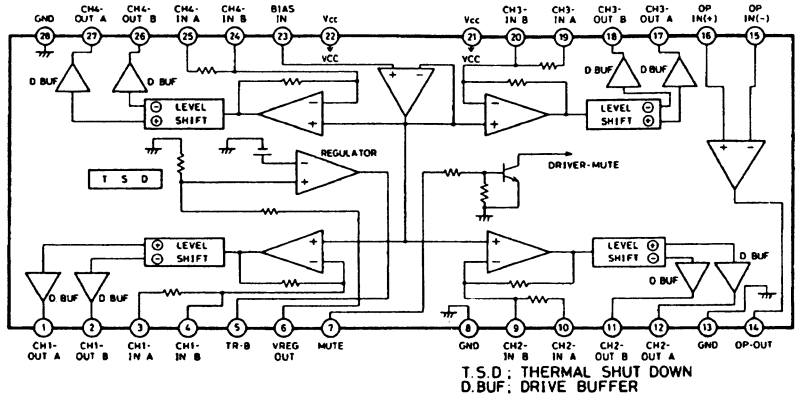
IC101 CXA1782BQ (Servo Signal Processor)

No.	Name	I/O	Function
1	FEO	O	Focus error amplifier output. Connection internally to the comparator input.
2	FEI	I	Focus error input.
3	FDFCT	I	Capacitor connection pin for detect time constant.
4	FGD	I	Ground this pin through a capacitor when decreasing the focus servo high-frequency gain.
5	FLB	I	External time constant setting pin for increasing the focus servo low frequency.
6	FE_O	O	Focus drive output.
7	FE_M	I	Focus amplifier negative input.
8	SRCH	I	External time constant setting pin for generating focus servo waveform.
9	TGU	I	External time constant setting pin for switching track-ing high frequency gain.
10	TG2	I	External time constant setting pin for switching track-ing high frequency gain.
11	FSET	I	High cut off frequency setting pin for focus and tracking phase compensation amplifier.
12	TA_M	I	Tracking amplifier negative input.
13	TA_O	O	Tracking drive output.
14	SP_P	I	Sled amplifier non-inverted input.
15	SL_M	I	Sled amplifier negative input.
16	SL_O	O	Sled drive output.
17	ISET	I	Setting pin for Focus search, Tracking jump and Sled kick current.
18	VCC	-	+5.0V
19	CLK	I	Serial data transfer clock input from CPU.
20	XLT	I	Latch input from CPU.
21	DATA	I	Serial data input from CPU.
22	XRST	I	Reset input; resets at Low.
23	C.OUT	O	Track number count signal output.
24	SENS	O	Outputs FZC, DFCT, TZC, Gain, BAL, and others according to the command from CPU.
25	FOK	O	Focus OK comparator output.
26	CC2	O	Input pin for the DEFECT bottom hold output capacitance-coupled.
27	CC1	I	DEFECT bottom hold output.
28	CB	I	Connection pin for DEFECT bottom hold capacitor.
29	CP	I	Connection pin for MIRR hold capacitor. MIRR comparator non-inverted input.
30	RF_I	I	Input pin for the RF summing amplifier output capacitance-coupled.
31	RF_O	O	RF summing amplifier output. Eye pattern check point.
32	RF_M	I	RF summing amplifier inverted input. The RF amplifier gain is determined by the resistance connected between this pin and RFO pin.
33	LD	O	APC(Auto Power Controller) amplifier output.
34	PHD	I	APC(Auto Power Controller) amplifier input.
35	PHD1	I	RF I-V amplifier inverted input. Connect these pins to the photo diodes A + C and B + D pins.
36	PHD2	I	RF I-V amplifier inverted input. Connect these pins to the photo diodes A + C and B + D pins.
37	FE_BIAS	I	Bias adjustment of focus error amplifier.
38	F	I	F I-V and E I-V amplifier inverted input. Connect these pins to the photo diodes F and E.
39	E	I	F I-V and E I-V amplifier inverted input. Connect these pins to the photo diodes F and E.
40	EI	-	I-V amplifier E gain adjustment. (When not using automatic balance adjustment.)
41	VEE	-	Ground
42	TEO	O	Tracking error amplifier output. E-F signal output.
43	LPFI	I	Comparator input for balance adjustment. (Input from TEO through LPF.)
44	TEI	I	Tracking error input.
45	ATSC	I	Window comparator input for ATSC detection.
46	TZC	I	Tracking zero-cross comparator input.
47	TDFCT	I	Capacitor connection pin for defect time constant.
48	VC	O	(VCC + VEE) / 2 DC voltage output.

IC BLOCK DIAGRAM

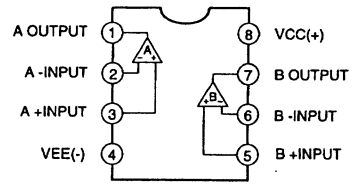
IC102 BA6398FP (POWER DRIVER)

No.	Designation	Description
1	CH1-OUT A	Driver CH1 negative output
2	CH1-OUT B	Driver CH1 positive output
3	CH1-IN A	Driver CH1 input
4	CH1-IN B	Input terminal for adjustment driver CH1 gain
5	Tr-B	Connects external Tr base
6	Vreg OUT	Connects external output
7	MUTE	Mute control terminal
8	GND	GND
9	CH2-IN B	Input terminal for adjusting driver CH2 gain
10	CH2-IN A	Driver CH2 input
11	CH2-OUT B	Driver CH2 negative output
12	CH2-OUT A	Driver CH2 positive output
13	GND	Substrate GND
14	OP OUT	Operation amplifier output
15	OP IN (-)	Operation amplifier negative intput
16	OP IN (+)	Operation amplifier positive intput
17	CH3-OUT A	Driver CH3 negative output
18	CH3-OUT B	Driver CH3 positive output
19	CH3-IN A	Driver CH3 input
20	CH3-IN B	Input terminal for adjustment driver CH3 gain
21	VCC	Power terminal
22	VCC	Power terminal
23	BIAS IN	Bias amplifier input terminal
24	CH4-IN B	Input terminal for adjusting driver CH4 gain
25	CH4-IN A	Driver CH4 input
26	CH4-OUT B	Driver CH4 positive output
27	CH4-OUT A	Driver CH4 negative output
28	GND	Substrate GND



T.S.D : THERMAL SHUT DOWN
D.BUF : DRIVE BUFFER

IC106 NJM4558D (Buffer Amplifier)



IC BLOCK DIAGRAM

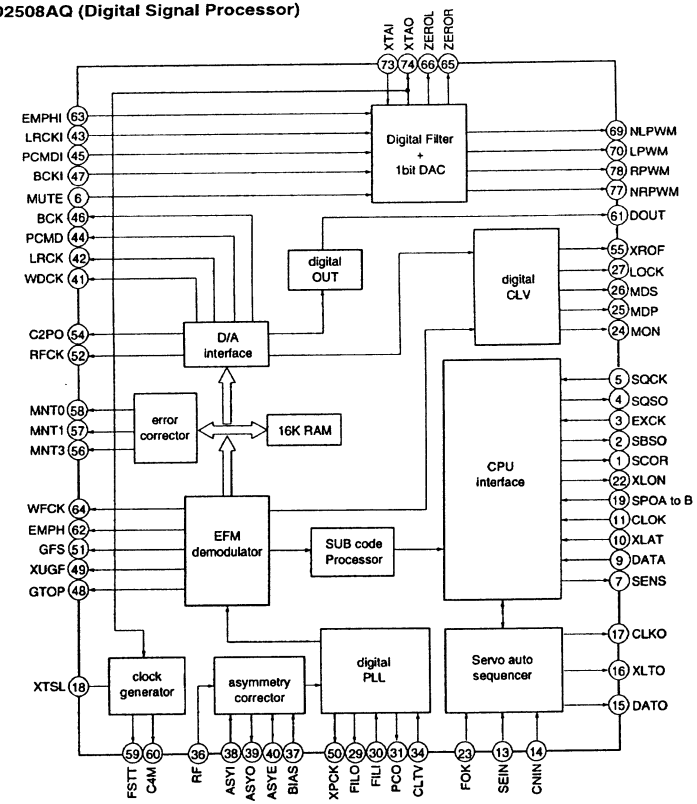
IC104 CXD2508AQ (Digital Signal Processor)

No.	Pin Name	I/O	Function
1	SCOR	O	Turns [H] when sync SO or SI is detected.
2	SBSO	O	Serial output of sub-code P - W.
3	EXCK	I	Clock input for reading SBSO.
4	SQSO	O	Serial output of SUBQ (80-bit).
5	SQCK	I	Clock input for reading SQSO.
6	MUTE	I	[H] at muting, [L] at muting cancel.
7	SENS	O	SENS signal output to CPU.
8	XRST	I	System reset, [L] at resetting.
9	DATA	I	Inputs serial data from CPU.
10	XLAT	I	Latches input from CPU. Serial data latches at falling edge.
11	CLOK	I	Inputs serial data transfer clock from CPU.
12	VSS	-	GND. (0V)
13	SEIN	I	Inputs SENS signal from SSP.
14	CNIN	O	Inputs track jump count signal.
15	DATO	O	Outputs serial data to SSP.
16	XLTO	O	Outputs latches to SSP. Serial data latches at falling edge.
17	CLKO	I	Outputs serial data transfer clock to SSP.
18	SPOA	I	Interface for extension of M. processor (input A).
19	SPOB	I	Interface for extension of M. processor (input B).
20	SPOC	I	Interface for extension of M. processor (input C).
21	XTSL	I	Crystal selection L : 16.9344MHz, H : 33.8688MHz.
22	XLON	O	Interface for extension of M. processor (output).
23	FOK	I	Focus OK signal input pin. Used servo auto sequencer with SENS output.
24	MON	O	ON/OFF control signal for spindle motor.
25	MDP	O	Servo control signal for spindle motor.
26	MDS	O	Servo control signal for spindle motor.
27	LOCK	O	The output of this pin is [H] when the GFS signal sampled at 460 Hz is [H]. It turns [L] when the GFS signal turns out [L] 8 or more times in succession.
28	TEST	I	Pin for TEST. Normal used stage : GND.
29	FILO	O	Output of filter for master PLL. (Slave = Digital PLL)
30	FILI	I	Inputs to filter for master PLL.
31	PCO	O	Outputs of charge pump for master PLL.
32	VDD	-	Power supply for digital. (+5V)
33	AVSS1	-	Power supply for analog. (0V)
34	CLTV	I	VCO control voltage input for master PLL.
35	AVDD1	-	Power supply for analog. (+5V)
36	RF	I	EFM signal input.
37	BIAS	I	Inputs constant current for asymmetry correction circuit.
38	ASYI	I	Inputs comparator voltage for asymmetry correction circuit.
39	ASYO	O	EFM fill swing output. ([L] = VSS, [H] = VDD)
40	ASYE	I	[L] : OFF of asymmetly correction. [H] : ON of asymmetly correction.

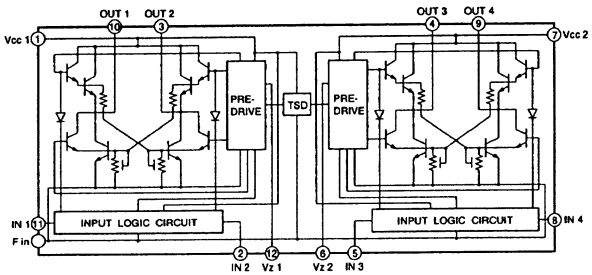
No.	Pin Name	I/O	Function
41	WDCK	O	D/A interface for 48-bit slot. Ward clock (f = 2FS).
42	LRCK	O	D/A interface for 48-bit slot. LR clock (f = FS).
43	LRCKI	I	Inputs LR clock to DAC. (48-bit slot)
44	PCMD	O	D/A interface. Serial data (2'SCOMP, MBS first)
45	PCMDI	I	Inputs audio data to DAC. (48-bit slot)
46	BCK	O	D/A interface. Bit clock.
47	BCKI	I	Inputs bit clock to DAC. (48-bit slot)
48	GTOP	I	GTOP signal output.
49	XUGF	O	XUGF signal output.
50	XPCK	O	XPCK signal output.
51	GFS	O	GFS signal output.
52	RFCK	O	RFCK signal output.
53	VSS	-	GND. (0V)
54	C2PO	O	C2PO signal output.
55	XROF	O	XROF signal output.
56	MNT3	O	MNT3 signal output.
57	MNT1	O	MNT1 signal output.
58	MNT0	O	MNT0 signal output.
59	FSTT	O	2/3 divided output of pins 73 or 74.
60	C4M	O	4.2336 MHz output.
61	DOUT	O	Digital out OUTPUT pin.
62	EMPH	O	Stays [H] for playback disc provided with emphasis or [L] for that without emphasis.
63	EMPHI	I	De-emphasis ON/OFF of DAC. [H] at ON, [L] at OFF.
64	WFCK	O	WFCK(Write Frame Clock) signal output.
65	ZEROL	O	Outputs detection for non-sound data. [H] at detection for non-sound data (L-ch).
66	ZEROR	O	Outputs detection for non-sound data. [H] at detection for non-sound data (R-ch).
67	DTS1	I	Test pin for DAC. Normal used state : [L]
68	VDD	-	Power supply for DAC.
69	NLPWM	O	Outputs PWM for L-ch. (Negative Phase)
70	LPWN	O	Outputs PWM for L-ch. (Positive Phase)
71	AVDD2	-	Power supply for PWM driver.
72	AVDD3	-	Power supply for X'tal.
73	XTAI	I	Inputs X'tal oscillation circuit (33.8688 MHz).
74	XTAO	O	Outputs X'tal oscillation circuit (33.8688 MHz).
75	AVSS3	-	Power supply for X'tal. (GND)
76	AVSS2	-	Power supply for PWM driver.(GND)
77	NRPWM	O	Outputs PWM for R-ch. (Negative Phase)
78	RPWM	O	Outputs PWM for R-ch. (Positive Phase)
79	DST2	I	Test pin for DAC. Normal used state : [L]
80	DST3	I	Test pin for DAC. Normal used state : [L]

IC BLOCK DIAGRAM

IC104 CXD2508AQ (Digital Signal Processor)

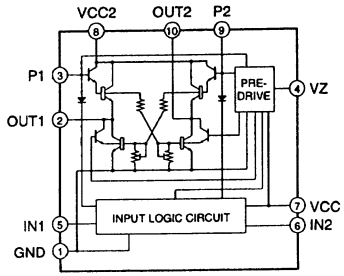


IC131 LB1648 (Up / Down Loading Driver)



IN 1	IN 2	OUT 1	OUT 2	IN 3	IN 4	OUT 3	OUT 4
0	0	OPEN	OPEN	0	0	OPEN	OPEN
1	0	H	L	1	0	H	L
0	1	L	H	0	1	L	H
1	1	L	L	1	1	L	L

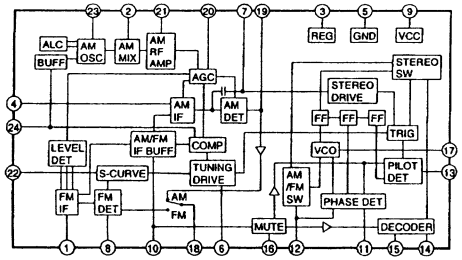
IC132 LB1641 (Open / Close Switch)



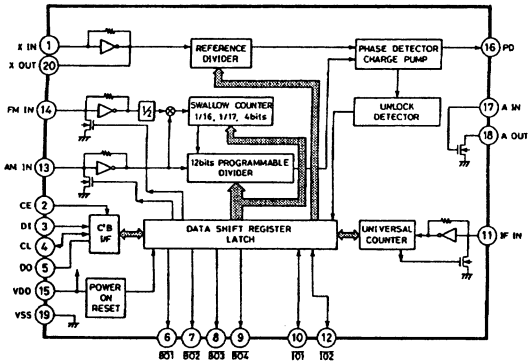
Input		Output		Action
IN1	IN2	OUT1	OUT2	
0	0	0	0	Brake
1	0	1	0	Normal(Reverse)Rotary
0	1	0	1	Reverse(Normal)Rotary
1	1	0	0	Brake

IC BLOCK DIAGRAM

IC231 LA1832ML (AM/FM IF AMP & FM-MPX)



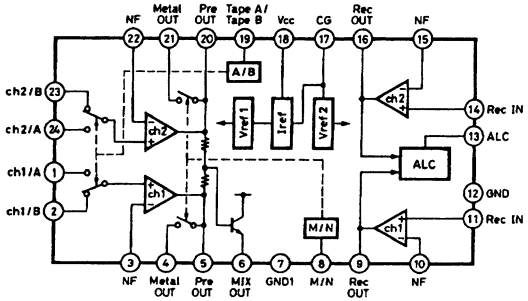
IC245 LC72131M (PLL Synthesizer)



No.	Pin Name	I/O	Function
1	XIN	I	X'tal (7.2MHz) input.
2	CE	I	Chip enable input.
3	DI	I	Serial data input.
4	CL	I	Serial clock input.
5	DO	O	Serial data output.
6	BO1	O	Output port.
7	BO2	O	Output port.
8	BO3	O	Output port.
9	BO4	O	Output port.
10	IO1	I/O	Input/Output port.

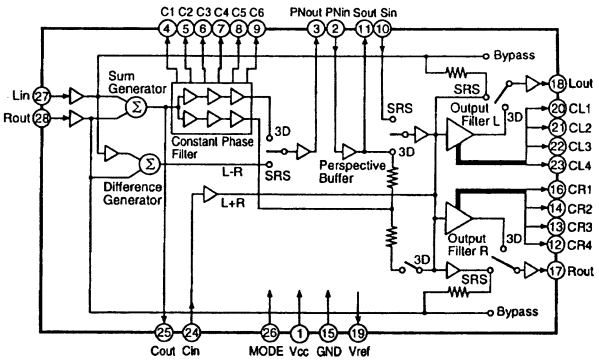
No.	Pin Name	I/O	Function
11	IFIN	I	IF counter input.
12	IO2	I/O	Input/Output port.
13	AMIN	I	AM local oscillator input.
14	FMIN	I	FM local oscillator input.
15	VDD	-	Power supply.
16	PD	O	PLL charge pump output.
17	AIN	I	PLL active low-pass filter input.
18	AOUT	O	PLL active low-pass filter output.
19	Vss	-	GND.
20	XOUT	O	X'tal (7.2MHz) output.

IC371 TA8189N (Pre-Amplifier for Tape Deck)



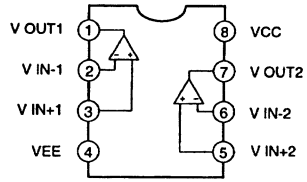
IC BLOCK DIAGRAM

IC413 SRS5250S (Sound Retrieval System 3D Audio Processor)

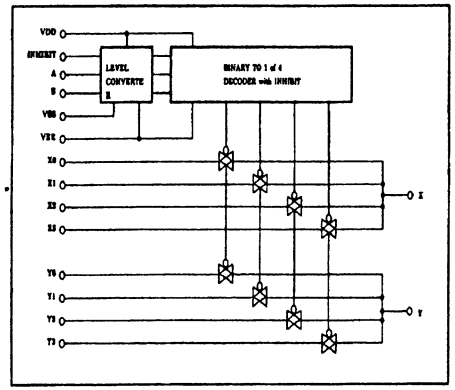


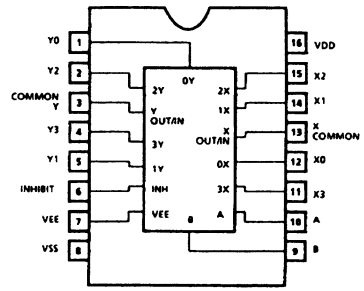
No.	Pin Name	I/O	Function
1	VCC	-	8 to 13V supply.
2	PN IN	I	Signal input from perspective network.
3	PN OUT	O	Signal output to perspective network.
4	C1	I	Constant phase filter capacitor 1
5	C2	I	Constant phase filter capacitor 2
6	C3	I	Constant phase filter capacitor 3
7	C4	I	Constant phase filter capacitor 4
8	C5	I	Constant phase filter capacitor 5
9	C6	I	Constant phase filter capacitor 6
10	S IN	I	Signal input from SPACE CONTROL.
11	S OUT	O	Signal loutput to SPACE CONTROL.
12	CR4	I	3D output filter (right) capacitor 3 in.
13	CR3	I	3D output filter (right) capacitor 2 in.
14	CR2	I	3D output filter (right) capacitor 1 in.
15	GND	-	Ground.
16	CR1	O	3D output filter (right) capacitor 1 out.
17	ROUT	O	Right signal output.
18	LOUT	O	Left signal output.
19	VREF	O	Vcc/2
20	CL1	O	3D output filter (left) capacitor 1 out.
21	CL2	I	3D output filter (left) capacitor 1 in.
22	CL3	I	3D output filter (left) capacitor 2 in.
23	CL4	I	3D output filter (left) capacitor 3 in.
24	CIN	I	Signal input from CENTER CONTROL.
25	COUT	O	Signal output to CENTER CONTROL.
26	MODE	I	SRS/3D/PASS mode select.
27	LIN	I	Left signal input.
28	RIN	I	Right signal input.

IC414, IC451 NJM4558L (Operation Amplifier)



IC450 BU4052BCF (Dual 2-Input 4-ch Analog Multiplexer / De-Multiplexer)

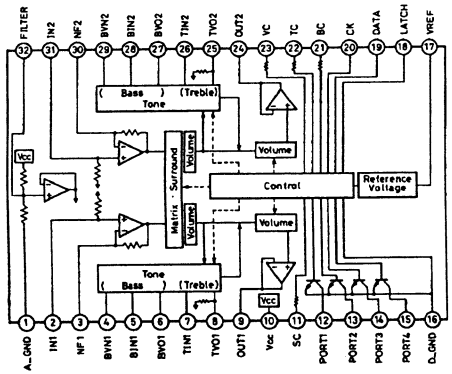




Control Inputs			[ON] Channel
INHIBIT	A	B	
L	L	L	X0 Y0
L	H	L	X1 Y1
L	L	H	X2 Y2
L	H	H	X3 Y3
H	X	X	None
X : Don't care			

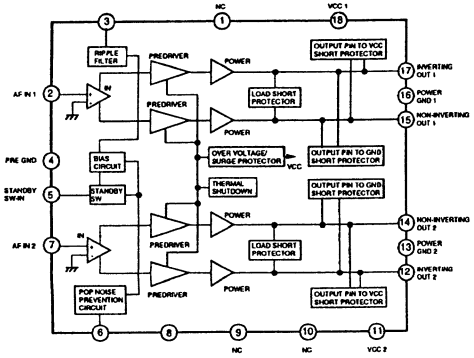
IC BLOCK DIAGRAM

IC458 BH3854AFS (Audio Sound Control)

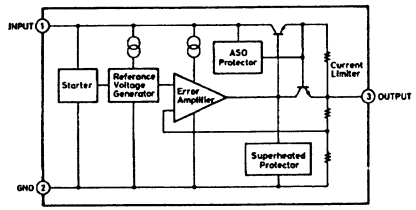


No.	Pin Name	I/O	Function
1	A GND	-	Analog GND.
2	IN1	I	Volume 1ch input.
3	NF1	I	Amp.gain 1ch input.
4	BVN1	I	Low-pass filter 1ch input.
5	BIN1	I	Low-pass filter 1ch input.
6	BV01	I	Low-pass filter 1ch input.
7	TIN1	I	Higt-pass filter 1ch input.
8	TV01	I	Higt-pass filter 1ch input.
9	OUT1	O	Volume 1ch output.
10	Vcc	-	Power supply.
11	SC	I	Switching shock prevention.
12	PORT1	O	Port output.
13	PORT2	O	Port output.
14	PORT3	O	Port output.
15	PORT4	O	Port output.
16	D GND	-	Digital GND.
17	VREF	O	Reference voltage output.
18	LATCH	I	Serial latch input.
19	DATA	I	Serial data input.
20	CK	I	Serial clock input.
21	BC	I	Switching shock prevention.
22	TC	I	Switching shock prevention.
23	VC	I	Switching shock prevention.
24	OUT2	O	Volume 2ch output.
25	TV02	I	Higt-pass filter 2ch input.
26	TIN2	I	Higt-pass filter 2ch input.
27	BV02	I	Low-pass filter 2ch input.
28	BIN2	I	Low-pass filter 2ch input.
29	BVN2	I	Low-pass filter 2ch input.
30	NF2	I	Amp.gain 2ch input.
31	IN2	I	Volume 2ch input.
32	FILTER	I	Filter input.

IC471 LA4705NA (Power Amplifier)



IC497 NJM7805FA (3-Terminal Voltage Regulator)



IC BLOCK DIAGRAM

IC601 M38174M8-290 (Micro Processor)

NO.	NAME	I/O	DESCRIPTION	NO.	NAME	I/O	DESCRIPTION
1	CD-SW1	I	OPEN/CLOSE switch input.	41	SOUND 4	O	SOUND 4(JAZZ/KARAOKE) LCD driver.
2	CD-SW2	I	PLAY/UNLOAD switch input.	42	SOUND 3	O	SOUND 3(CLASSIC) LCD driver.
3	TAPE SW	I	Tape A play, tape B rec switch input.	43	SOUND 2	O	SOUND 2(ROCK) LCD driver.
4	AD SW0	I	Mic use/unuse protect input/SEL IN select.	44	SOUND 1	O	SOUND 1(POP) LCD driver.
5	SELOUT1	O	Select output.	45	G5	O	LCD grid output.
6	SELOUT0	O	Select output.	46	G4	O	LCD grid output.
7	PULL UP	O	Pull up power supply.	47	G3	O	LCD grid output.
8	PRE MUTE	O	PRE mute control output.(H : on)	48	G2	O	LCD grid output.
9	MAIN MUT	O	Main mute control output.(H : on)	49	G1	O	LCD grid output.
10	CD SQCK	O	CD DSP SQCK ioutput.	50	S18	O	LCD segment output.
11	CD SENS	I	CD DSP SENS input.	51	S17	O	LCD segment output.
12	CD SUBQ	I	CD DSP SUBQ input.	52	S16	O	LCD segment output.
13	O/C MTR	O	Tray open/close motor control output.(H : open)	53	S15	O	LCD segment output.
14	LOAD MTR	O	Tray loading motor control output.(H : load)	54	S14	O	LCD segment output.
15	U/D MTR	O	Up/down motor control output.	55	S13	O	LCD segment output.
16	CD XRES	O	CD power output.(H : CD power off)	56	S12	O	LCD segment output.
17	CD XLAT	O	CD DSP XLAT output.	57	S11	O	LCD segment output.
18	VF KB/C	O	Amp.vocal fader control output.	58	S10	O	LCD segment output.
19	CD CLOCK	O	CD DSP CLOCK output.	59	S9	O	LCD segment output.
20	CD-DATA	O	CD DSP DATA output.	60	S8	O	LCD segment output.
21	PHS	I	Photo sensor input.(H : slit position)	61	S7	O	LCD segment output.
22	PLAY SW	I	Play switch input.(L : play)	62	S6	O	LCD segment output.
23	V CHK	I	Voltage check, failure	63	S5	O	LCD segment output.
24	VD GND	O	GND(VD).	64	S4	O	LCD segment output.
25	SCOR	I	CD SCOR detection input.	65	S3	O	LCD segment output.
26	IR	I	Remote control input.	66	S2	O	LCD segment output.
27	RESET	I	System reset input.	67	S1	O	LCD segment output.
28	XCIN	I	Sub clock intput.(32kHz)	68	DISC 3	O	DISC 3 LCD driver.
29	XCOUT	O	Sub clock output.(32kHz)	69	DISC 2	O	DISC 2 LCD driver.
30	XIN	I	Mian clock intput.(4.19MHz)	70	DISC 1	O	DISC 1 LCD driver.
31	XOUT	O	Main clock output.(4.19MHz)	71	JOG B	I	JOG B input.
32	VSS	-	GND.	72	JOG A	I	JOG A input.
33	P CON	O	Power control output.(H : power on)	73	VCC	-	Power supply.
34	BEAT	O	Beat cancel control output.(L : pos. 1, H : pos. 2)	74	VEE	-	GND(FL).
35	CLOCK	O	Clock output to tuner PLL/ELE.VOL.	75	AVSS	-	GND(A/D)
36	DATA	O	Data output to tuner PLL/ELE.VOL.	76	VREF	-	Refelence voltage.
37	TU CE	O	Chip enable output to tuner PLL.	77	SP RY	O	Speaker relay output.
38	TU DI	I	Serial data input from tuner PLL.	78	KEY 0	I	Key input.
39	AMP CE	O	Chip enable control for BH3854FS.	79	KEY 1	I	Key input.
40	SRS	O	SRS control output.(H : on)	80	CD SW0	I	FOK limit input.

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